



Submitted by: AECOM Lansing, MI Proj. No. 60103292 December 28, 2009

Preliminary Site Investigation

M-89, Plainwell, Allegan County, MI

MDOT CS # 03023 MDOT JN 90028 and 89306



December 28, 2009

Mr. Steve Adams, Environmental Staff Specialist Michigan Department of Transportation Geoenvironmental Services Unit, Construction & Technology Division State Secondary Complex 8885 Ricks Road P.O. Box 30049 Lansing, MI 48909

RE: Preliminary Site Investigation (PSI)

M-89 City of Plainwell, Allegan County, Michigan

AECOM Project No. 60103292

Dear Mr. Adams:

AECOM is pleased to present this Preliminary Site Investigation report for the work completed along M-89 in the City of Plainwell, Allegan County, Michigan. Six paper and two electronic copies of the report have been submitted for your use.

If you have any questions regarding this report, or the findings presented within, please contact us at (517) 913-5800.

Respectfully,

Allan R. Blaske, P.G., CPG Senior Project Geologist Jamie S. Matus, CPG Vice President

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Executive Summary

AECOM has prepared this Preliminary Site Investigation (PSI) for properties located along M-89 between the western side of the US-131 interchange and Hicks Street in the City of Plainwell, Allegan County, Michigan. In addition, samples of sediment were collected from the Kalamazoo River Mill Race. The area consists of a mix of industrial, commercial and residential properties. Nine properties were identified by the Michigan Department of Transportation (MDOT) as sites of potential environmental contamination, consisting of a variety of active and former uses deemed to be potential areas of contamination. This PSI was completed to characterize potential soil and groundwater contamination along the proposed project route. The project will consist of water and sewer improvements, culvert replacement and improvements, guardrail improvements, sidewalk improvements, curb and gutter improvements, and slope restoration along this stretch of M-89.

AECOM conducted sampling along the MDOT right-of-way (ROW) corridor at each of the suspect sites to evaluate if impacted soil and/or groundwater would be encountered during construction. Samples were collected from 19 direct-push borings. In addition, four grab samples were collected from sediment located the Kalamazoo River Mill Race river bottom. One soil sample from each boring was analyzed for potential soil contamination, and groundwater samples were collected from six borings.

To determine if soils and groundwater were impacted, analytical results were compared to the Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006. If contaminant levels in soil exceeded the Residential and Commercial I Drinking Water Protection (DWP) Criteria, they were considered impacted. If contaminants in the groundwater exceeded the Residential & Commercial I Drinking Water (DW) Criteria they were considered impacted. These criteria were used to provide budgetary estimates of volumes of impacted soil and groundwater. Residential criteria are utilized to define a site as a "facility" under the Natural Resources and Environmental Protection Act (NREPA), 1994 P.A. 451, as amended.

Analytical results indicate that PNA compounds were detected in three of the 19 soil samples, but concentrations in excess of applicable criteria were only identified at one boring location, SB-2. SB-2 is located near the northeast corner of the Harold Zeigler Chrysler dealership property, which is located at 1186 East M-89. No contaminants were found in groundwater samples collected during this investigation. PNA compounds were detected in two of the four sediment samples from the Kalamazoo River Mill Race, and lead was detected in one sample in excess of the statewide default background concentration. All PNA compounds and metals were below applicable criteria. No PCBs were detected in any of the sediment samples.

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Based on this sampling conducted during this investigation, significant quantities of impacted soil and groundwater should not be expected during construction activities.



1.0 Introduction

The Michigan Department of Transportation (MDOT) Construction and Technology Division retained AECOM to conduct a Preliminary Site Investigation (PSI) along M-89 in Allegan County, Michigan. The section of M-89 is located in the City of Plainwell, between the western side of US-131 to the west and Hicks Street to the east. Figure 1 illustrates the project location. Soil and groundwater samples were collected at nine properties which were identified as potential sites of environmental contamination along this section of M-89. The proposed MDOT project consists of water and sewer improvements, culvert replacement and improvements, guardrail improvements, sidewalk improvements, curb and gutter improvements, and slope restoration along this stretch of M-89. The purpose of this investigation was to: 1) collect samples of soil and/or groundwater at sites of known or potential contamination; 2) evaluate and estimate the extent of contaminated soil and/or groundwater within the areas of proposed construction; 3) recommend further investigation not covered in the PSI work plan; and, 4) provide recommendations for methods, procedures and construction cost estimates for properly addressing contamination that may be encountered within the area of proposed construction.

1.1 Site Location

Nine sites were investigated for this PSI along M-89 in the City of Plainwell, Allegan County, Michigan. These sites include:

- 1149 E. M-89, (Admiral gasoline station)
- 1186 E. M-89 (Harold Zeigler Chrysler dealership)
- 665 Allegan Street (Admiral gas station)
- 623 Allegan Street (vacant lot former gasoline station and waste oil disposal facility)
- 601 Allegan Street (vacant lot former gasoline station)
- 551 Allegan Street (Wesco gas station)
- Plainwell Paper Mill
- Kalamazoo River Mill Race bridge
- 200 Block of East Bridge Street (SBC Communications facility)

The location, address, and MDOT stationing of each site is provided on Table 1. Figure 1 illustrates the approximate project location. Figures 2 through 7 provide detailed illustrations of soil borings at the areas of investigation along the M-89 corridor.

1.2 General Site Characteristics

The sites of potential environmental contamination are located along M-89 through the City of Plainwell, and consist of three active gasoline stations, two former gasoline stations, an inactive



paper mill, an automotive dealership, a telecommunications facility, and bridge over the Kalamazoo River Mill Race. M-89 in this area is generally a two-lane roadway, although additional lanes are present near the US-131 overpass, with curb and gutter present along the entire length investigated during this PSI. Parallel parking on each side of M-89 is located within the downtown area.

1.3 Background Information

Site reconnaissance of the project area was conducted on November 9, 2009. Prior to the site visit, MDOT provided AECOM with an MDOT Office Memorandum (dated August 10, 2009), which summarized sites of known or potential environmental contamination along M-89, in the proposed construction area. The sites identified (from west to east along M-89) include the following:

- 1149 E. M-89 (Admiral gasoline station) This site was identified (by MDOT) as a site of
 potential environmental contamination. The address is an active gasoline filling station and
 convenience store.
- <u>1186 E. M-89 (Harold Zeigler Chrysler dealership)</u> This site was identified (by MDOT) as a site of potential environmental contamination. The address is an active automotive dealership.
- 665 Allegan Street (Admiral gas station) This site was identified (by MDOT) as a site of
 potential environmental contamination. The address is an active gasoline filling station and
 convenience store.
- 623 Allegan Street (vacant lot former gasoline station and waste oil disposal facility) This site was identified (by MDOT) as a site of potential environmental contamination. The address is currently vacant and is located at the southeast corner of Allegan Street and Naomi Street, and is a former gasoline station and waste oil disposal facility. This site is located under Part 201 of NREPA as a site of environmental contamination.
- 601 Allegan Street (vacant lot former gasoline station) This site was identified (by MDOT)
 as a site of potential environmental contamination. The address is currently vacant and is
 located at the southwest corner of Allegan Street and Prince Street, and is a former gasoline
 station.
- 551 Allegan Street (Wesco gas station) This site was identified (by MDOT) as a site of
 potential environmental contamination. The address is an active gasoline filling station and
 convenience store, located at the southeast corner of Allegan Street and Prince Street.
- <u>Plainwell Paper Mill</u> This site was identified (by MDOT) as a site of potential environmental contamination. This site has nearly a ½-mile of frontage on the north side of Allegan Street between the Kalamazoo River Mill Race and Prospect Street. The mill is currently closed but is part of the Kalamazoo River Superfund site.



- <u>Kalamazoo River Mill Race bridge</u> This site was identified (by MDOT) as a site of potential environmental contamination. This site consists of a bridge on M-89 over the Kalamazoo River Mill Race and is part of the Kalamazoo River Superfund site.
- 200 Block of East Bridge Street (SBC Communications facility) This site was identified (by MDOT) as a site of potential environmental contamination. This site is an SBC Communications facility with a diesel-powered generator. The site is immediately adjacent to the east of the London Grill which is located at 200 East Bridge Street.

1.4 Scope of Work

The proposed investigative activities included collecting soil and/or groundwater samples from the M-89 ROW at each suspect site, in order to characterize contaminants that may be encountered during construction activities. The MDOT project will consist of water and sewer improvements, culvert replacement and improvements, guardrail improvements, sidewalk improvements, curb and gutter improvements, and slope restoration along this stretch of M-89. The sample locations were concentrated around the areas of suspected impact within the proposed construction zone. Samples were collected by advancing direct push (Geoprobe) borings at the known or potential areas of contamination and within the MDOT right of way. If groundwater was encountered during drilling, a temporary monitoring well was installed to collect a groundwater sample at select locations. In addition, four grab samples were collected from river bottom sediment located in the Kalamazoo River Mill Race. Additional activities completed as part of the scope of work include providing recommendations for further investigation, methods and procedures, and construction cost estimates for properly addressing contamination that intersects the area of proposed construction.

On November 9, 12, and 13, 2009, AECOM conducted the sampling along the ROW corridor at each of the subject sites. A total of 19 borings were advanced and sampled across the nine sites. Table 2 provides a summary of the boring numbers, boring depths, sample depths, locations, and addresses of sampling points.

The overall approach of the sampling was to screen the soil at each boring with a photoionization detector (PID) to determine the zones of highest impact of volatile organic compounds, including gasoline. Soil samples were screened with the PID at one-foot intervals and observed for staining that may indicate the presence of impact. The soil intervals with the highest PID reading were generally chosen for laboratory analysis. If the PID did not detect any contamination, AECOM obtained samples that were representative of the soil conditions and generally within the depth of proposed construction. One soil sample from each boring was submitted to the laboratory for analysis. Groundwater samples were collected from 6 of the 19 borings.



To determine if soils and groundwater were impacted, the analytical results were compared to Part 201 Residential and Commercial I Generic Cleanup Criteria, January 2006 revision. If contaminant levels in soil exceeded the Residential and Commercial I Drinking Water Protection (DWP) Criteria they were considered impacted. If contaminants in the groundwater exceeded the Residential & Commercial I Drinking Water (DW) Criteria they were considered impacted. Contaminant concentrations which exceed these criteria are utilized to define a site as a "facility" under the Natural Resources and Environmental Protection Act (NREPA), 1994 P.A. 451, as amended.

The DWP and DW criteria were used to estimate the volume of impacted soils that may be encountered within the areas of construction. If other criteria were exceeded but below DWP (i.e., direct contact criteria or state default background levels), the soil is still considered to be impacted for the purposes of this report.



2.0 Investigation Methods

2.1 Soil and Groundwater Sampling

Soil was collected at each boring location using a direct-push, continuous sampler (Geoprobe 6620 DT) to determine the subsurface soil stratigraphy. An AECOM scientist was present during all boring activities to record the type of soil encountered, field screen all of the soil samples collected, and determine which samples to submit for laboratory analysis. During sampling, a PID was used to screen for possible contamination. If the PID indicated the potential presence of volatile compounds, a sample from the zone with the highest PID level was sent to the lab for analysis. If the PID did not indicate contamination, AECOM visually inspected the soil for staining or fill material and collected samples from these areas. If no staining was observed and no olfactory evidence was present, a representative soil sample was obtained for analysis. A boring log for each boring is contained in Appendix A.

To facilitate the collection of groundwater samples, a one-inch diameter PVC temporary monitoring well was installed in the borehole. The PVC well was placed in the open borehole with a five-foot section of slotted screen. Groundwater was removed from the temporary well pipe using polyethylene tubing connected to a peristaltic pump. Samples for analysis of metals were filtered using a 0.45 micron filter at the time of sampling. Groundwater sampling was conducted at 6 of the 19 boring locations, one from each of the sites.

All collected samples were placed into appropriate, clean, laboratory-supplied sample containers, and immediately placed in coolers with ice. Chain of custody forms were completed in the field at the time of sampling and accompanied the samples to the laboratory. Samples were delivered to Fibertec Environmental Services Laboratory in Holt, Michigan for analysis.

2.2 Sample Analytical Methods

Based on the review of the MDEQ information and the site reconnaissance, the potential contamination is related to former and current gasoline filling stations, a former paper mill, an automotive dealership, and a telecommunications facility. Tanks at the suspect underground storage tank (UST) sites likely contained leaded and/or unleaded gasoline and diesel fuel. The samples collected from locations related to the gasoline stations were submitted for analysis of select volatile organic compounds (VOCs) - including benzene, toluene, ethylbenzene, xylenes, naphthalene, MTBE, and trimethylbenzene isomers [BTEX + 5]), and semi-volatile polynuclear aromatic hydrocarbon (PNA) compounds. The samples from the automotive dealership were submitted for BTEX + 5, PNAs, and the metals cadmium, chromium, and lead analysis. The samples from the former paper mill were submitted for full-scan VOCs, PNAs, Michigan Ten Metals, and



polychlorinated biphenyls (PCBs). Samples were analyzed for the following parameters by the following methods:

Analytical Methods				
Volatile Organic Compounds (full-scan VOCs and BTEX+5)	Method 8260/5035			
Polynuclear Aromatic Hydrocarbons (PNAs) Method 8270				
Metals	Method 6020			
Polychlorinated Biphenyls	Method 8082/3550B			



3.0 Investigation Results

3.1 Soil Conditions & Site Hydrogeology

Site-specific soil stratigraphy was determined during the collection of soil samples. A boring log for each sampling location is contained in Appendix A. Table 2 summarizes the location and depth of the sampling points. Subsurface soils throughout the area of investigation consisted predominantly of dark brown to tan sands with varying amounts of silt and gravel. When encountered, groundwater samples were collected from temporary monitor wells. Permanent monitoring wells were not installed as part of this project and therefore, the actual direction of groundwater flow could not be determined.

1149 East M-89 (Admiral gasoline station)

Two borings (SB-1 and SB-2) were advanced (as illustrated on Figure 2) on the north side of M-89 adjacent to this address. Subsurface soil included a mix of fine-coarse grained sand and silty sand with varying amounts of gravel. All borings were advanced to a depth of 20 feet below ground surface (bgs). Groundwater was not encountered in either of these borings.

1186 East M-89 (Harold Zeigler Chrysler dealership)

Two borings (SB-3 and SB-4) were advanced on the south side of M-89, adjacent to this address (Figure 2). Both borings encountered predominantly fine-coarse sand and gravelly sand with some silt. Both borings were advanced to a depth of 20 feet bgs and groundwater was not encountered in either boring.

665 Allegan Street (Admiral gasoline station)

Three borings (SB-5, SB-6, and SB-7) were advanced adjacent to this site, located on the south side of Allegan Street (M-89), as shown on Figure 3. Borings encountered fine-coarse grained sand with varying amounts of both silt and gravel. All three borings were advanced to a total depth of 20 feet bgs. Groundwater was encountered in boring SB-5 at a depth of 19 feet bgs, SB-6 at 17.5 feet bgs, and in boring SB-7 at a depth of 16.5 feet bgs. A groundwater sample was collected from boring SB-6.

623 Allegan Street (former gasoline station and waste oil site)

Two borings (SB-8 and SB-9) were advanced at this location (southeast corner of Allegan Street and Naomi Street), on the south side of Allegan Street (M-89), as shown on Figure 3. Borings generally encountered fine-coarse grained silty sand with gravel. SB-8 was advanced to a depth of 15 feet bgs and SB-9 was advanced to a depth of 20 feet bgs. Groundwater was encountered at 14 feet bgs at both boring locations. A groundwater sample was collected from boring SB-9.



601 Allegan Street (former gasoline station)

Three borings (SB-10, SB-11, and SB-12) were advanced at this location (southwest corner of Allegan Street and Prince Street, on the south side of Allegan Street (M-89), as shown on Figure 4. Borings generally encountered fine-coarse grained silty sand with gravel, although a layer of sandy clay was encountered at SB-12 from 0 to 5 feet bgs. Borings SB-10 and SB-11 were advanced to a depth of 15 feet bgs and SB-12 was advanced to a depth of 20 feet bgs. Groundwater was encountered at 14 feet bgs at SB-10 and SB-12, and at 13 feet bgs at SB-11. A groundwater sample was collected from boring SB-12.

551 Allegan Street (Wesco gasoline station)

Three borings (SB-13, SB-14, and SB-15) were advanced at this location (southeast corner of Allegan Street and Prince Street, on the south side of Allegan Street (M-89), as shown on Figure 4. Boring SB-15 was located on the north side of M-89, across the street from the subject site. A monitoring well was observed on this side of the road, indicating the potential for migration of contamination beneath M-89. Borings generally encountered fine-medium grained silty sand underlain by fine-coarse grained gravelly sand. Each of these borings were advanced to a depth of 15 feet bgs. Groundwater was encountered at 13 feet bgs at SB-13, 14 feet bgs at SB-14, and at 13.5 feet bgs at SB-15. A groundwater sample was collected from boring SB-15.

Plainwell Paper Mill (inactive paper mill)

Three borings (SB-16, SB-17, and SB-18) were advanced at this location, which has nearly a ½-mile of frontage on the north side of Allegan Street between the Kalamazoo River Mill Race and Prospect Street - as shown on Figure 5. Borings generally encountered fine-medium grained sand with varying amounts of silt. The amount of gravel within the soil generally increased with depth at each boring location. Each of these borings were advanced to a depth of 15 feet bgs. Groundwater was encountered at 12 feet bgs at SB-16, 13 feet bgs at SB-17, and at 11.5 feet bgs at SB-18. A groundwater sample was collected from boring SB-17.

Kalamazoo River Mill Race bridge

Four sediment samples (SS-1 through SS-4) were collected from the stream bottom at this location, which is a bridge on M-89 over the Kalamazoo River Mill Race. One sample of the stream bottom sediment was collected at each of the four corners of the bridge structure, as indicated on Figure 6. The stream bottom sediments at each location generally consisted of coarse grained sands and very little to no fine grained sediments were encountered.



200 Block of East Bridge Street (SBC Communications facility)

One boring (SB-19) was advanced at this site, which is located immediately adjacent to the east of the London Grill which is located at 200 East Bridge Street (Figure 7). Soils encountered at SB-19 consisted of fine-medium grained silty sand underlain by fine-coarse gravelly sand. Groundwater was encountered groundwater at a depth of 11.5 feet bgs at SB-19. A groundwater sample was collected from this boring. SB-19 was advanced to a depth of 15 feet.

3.2 Soil and Groundwater Analytical Results

Soil sample analytical results for samples collected from the borings are summarized in Tables 3 through 7, and groundwater results are summarized in Tables 8 through 11. Copies of the laboratory reports are included in Appendix B.

1149 East M-89 (Admiral gasoline station)

Soil samples were collected from two borings (SB-1 and SB-2) at this site. No VOC compounds were detected above the laboratory reporting limits in either of these samples.

The sample collected from boring SB-2 contained benzo(a)pyrene at a concentration in excess of the drinking water protection criteria. Several other PNA compounds were detected in the soil samples from both SB-1 and SB-2 but at concentrations below applicable criteria.

No groundwater samples were collected from this site.

1186 E. M-89 (Harold Zeigler Chrysler dealership)

Soil samples were collected from two borings (SB-3 and SB-4) at this site, and no VOC or PNA compounds were detected above the laboratory reporting limit in either of these samples. Various metals were detected at concentrations below all applicable criteria in both samples.

No groundwater samples were collected from this site.

665 Allegan Street (Admiral gasoline station)

Soil samples were collected from three borings (SB-5, SB-6, and SB-7) at this site. No VOCs or PNAs were detected in these samples at concentrations above the laboratory reporting limit.

A groundwater sample was collected from boring SB-6 at this site. The sample did not contain any VOCs or PNAs at concentrations above the laboratory reporting limit.



623 Allegan Street (former gasoline station and waste oil site)

Soil samples were collected from two borings (SB-8 and SB-9) at this property. No VOCs or PNAs were detected in these samples at concentrations above the laboratory reporting limit. Both chromium and lead were detected in each of the samples, but at concentrations below the statewide default background.

A groundwater sample was collected from boring SB-9 at this site. The sample did not contain any VOCs or PNAs at concentrations above the laboratory reporting limit.

601 Allegan Street (former gasoline station)

Soil samples were collected from three borings (SB-10, SB-11, and SB-12) at this location. No VOCs were detected in these samples at concentrations above the laboratory reporting limit. One PNA compound (phenanthrene) was detected in the soil sample from SB-11 but at a concentration well below the applicable criteria.

551 Allegan Street (Wesco gasoline station)

Soil samples were collected from three borings (SB-13, SB-14, and SB-15) at this location. No VOC or PNA compounds were detected in these samples at concentrations above the laboratory reporting limit.

A groundwater sample was collected from boring SB-15 at this site. The sample did not contain any VOCs or PNAs at concentrations above the laboratory reporting limit.

Plainwell Paper Mill (inactive paper mill)

Soil samples were collected from three borings (SB-16, SB-17, and SB-18) along the southern edge of the former paper mill at this location. No VOC compounds were detected in these samples at concentrations above the laboratory reporting limit. One PNA compound (fluorine) was detected in the sample from SB-16, but at concentrations below applicable criteria. Several metals were detected in the samples from this site, but all at concentrations below the statewide default background concentration (with the exception of lead in SB -16 at 29,000 micrograms per kilogram). All concentrations were found to be below applicable criteria. Similarly, no PCBs were detected in these samples above the laboratory reporting limit.

A groundwater sample was collected from boring SB-17 at this site. The sample did not contain any VOCs, PNAs, PCBs, or metals at concentrations above the laboratory reporting limit.



Kalamazoo River Mill Race bridge

Four sediment samples were collected from the Kalamazoo River Mill Race, one sample at each corner of the M-89 bridge. The location of these samples is illustrated on Figure 6. Analytical data for the samples is summarized on Tables 13, 14, and 15.

Concentrations of metals in the sediment were generally low, with only one sample (lead in SS-4) at a concentration above the statewide default background for soil, and no concentrations exceed applicable criteria. Average concentrations of metals were low, and did not exceed any criteria. Average concentrations are expected to represent concentrations within a stockpile of excavated soil/sediment during construction.

No PCBs were detected in any of the four samples at concentrations above the laboratory reporting limit.

PNA compounds were found in two of the four samples (SS-1 and SS-3, both on the west side of the Mill Race), but at concentrations below applicable criteria.

200 Block of East Bridge Street (SBC Communications facility)

A soil and groundwater sample was collected from a single boring at this site (SB-19). No VOC or PNA compounds were detected in these samples at concentrations above the laboratory reporting limit.



4.0 Findings and Conclusions

AECOM collected soil and groundwater samples from 19 borings at sites of potential environmental concern along M-89 in the City of Plainwell, Allegan County. Soil was collected for analysis from all locations. Groundwater was collected at 6 of the 19 boring locations. Soil samples were collected at selected depths in the MDOT ROW in order to evaluate the extent of impacted soil within the areas of proposed construction.

Impacted soil was observed to be very limited along this section of M-89. No volatile organic compounds were found in soil samples, and only 3 samples contained PNA compounds above the laboratory detection limit. Of these, only the sample from SB-2 counted one compound (benzo(a)pyrene) at a concentration above the Generic Residential Direct Contact Criteria. Lead was found in two samples (SB-4 and SB-18) at concentrations above the Statewide Default Background, but below any applicable criteria. No PCBs were detected in any of the soil samples.

Groundwater samples were collected from each site, and no compounds (VOCs, PNAs, metals, PCBs) were detected at concentrations above the laboratory reporting limit.

Four sediment samples were collected from beneath the bridge over the Kalamazoo River Mill Race. No PCBs were detected above the laboratory reporting limit. One sample (SS-4) contained lead at a concentration greater than the Statewide Default Background, but below any applicable criteria. PNA compounds were found in 2 samples, but at concentrations below applicable criteria.

Based on the sampling conducted during this investigation, it does not appear that significant quantities of impacted soil, groundwater, or sediment will be encountered during construction activities.



5.0 Recommendations for Further Investigation

This preliminary site investigation identified very limited amounts of subsurface impacts within the study area. At this time, no further investigation is recommended to define the extent of impacts. Observed subsurface impacts appear to be isolated and in very low concentrations.



6.0. Recommendations for Field Procedures and Cost Estimates

Minor impacts to soil and sediment were identified as part of this PSI. These impacted materials appear to be isolated and the concentrations low. Removal and disposal of soil may be necessary during the construction activities, if visibly stained or odorous soil is observed. Based on the sampling of this investigation, it seems unlikely that large quantities of these soils will be encountered.

Impacted soil might be encountered in the areas adjacent to former and active gasoline filling stations. Once impacted soil is identified by the contractor, any excavated impacted soil should be segregated for proper testing and disposal. Concentrations observed in the samples collected during this investigation were low, and should not be expected to exceed direct contact criteria (hazardous to construction workers), especially during excavation and dilution of the soil.

Workers should wear the proper personal protective equipment (PPE) to eliminate exposure to impacted soil and groundwater, if encountered. As with all operating and former gasoline filling stations, the potential exists for impacts to soil and groundwater. The sampling performed during this PSI was not an exhaustive investigation, and it is possible that additional areas of contamination may be discovered during construction.

Safety is the responsibility of the contractor. Any excavation areas should be sloped to provide safe stable excavations. OSHA has initiated strict standards for safety within construction excavations. These standards are outlined in OSHA Health and Safety Standards for Excavations, 29 CFR, Part 1926, and other OSHA regulations. Please refer to this publication for more details regarding safety considerations for construction excavations.

To comply with the OSHA Standard 29 CFR 1910.120 (e), all employees working at a site who are exposed to hazardous substances, health hazards, or safety hazards must receive appropriate training.



7.0 General Qualifications

AECOM was retained to perform a Preliminary Site Investigation for 9 locations located along M-89 in the City of Plainwell, Allegan County, Michigan, between the west side of US-131 and Hicks Street. The information presented in this report, and the conclusions and recommendations contained herein, are based upon information obtained by AECOM and information supplied by MDOT.

AECOM assumes no responsibility for the discovery and elimination of hazards that could possibly cause accidents, injuries, or damage. Compliance with the recommendations and/or suggestions contained in this report in no way assures elimination of hazards or the fulfillment of a property owner's obligation under any local, state, or federal laws or any modifications or changes thereto. It is the responsibility of the subject property owner to notify authorities of any conditions that are in violation of current legal standards.

Environmental conditions and regulations are subject to constant change and reinterpretation. It should not be assumed that current conditions and/or regulatory positions will remain constant. Furthermore, because the facts stated in this report are subject to professional interpretation, differing conclusions could be reached by other professionals.

Contaminants may be hidden in the subsurface materials, having been placed there due to the actions of man, or covered by foliage, water, snow, concrete, asphalt or other materials. This contamination may not be present in predictable locations. The most that AECOM can do is formulate a logical assessment program to reduce the client's risk of later discovering unknown contamination. The greater the extent of exploration of a property, the greater the probability of finding contamination, if present. Even with very extensive exploration, it is not possible to say with total certainty that contaminants are not present at a particular site.



8.0 References

Michigan Department of Environmental Quality, Storage Tank Division, Website

Michigan Department of Environmental Quality, Environmental Response Division, Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, Administrative Rules, January, 2006

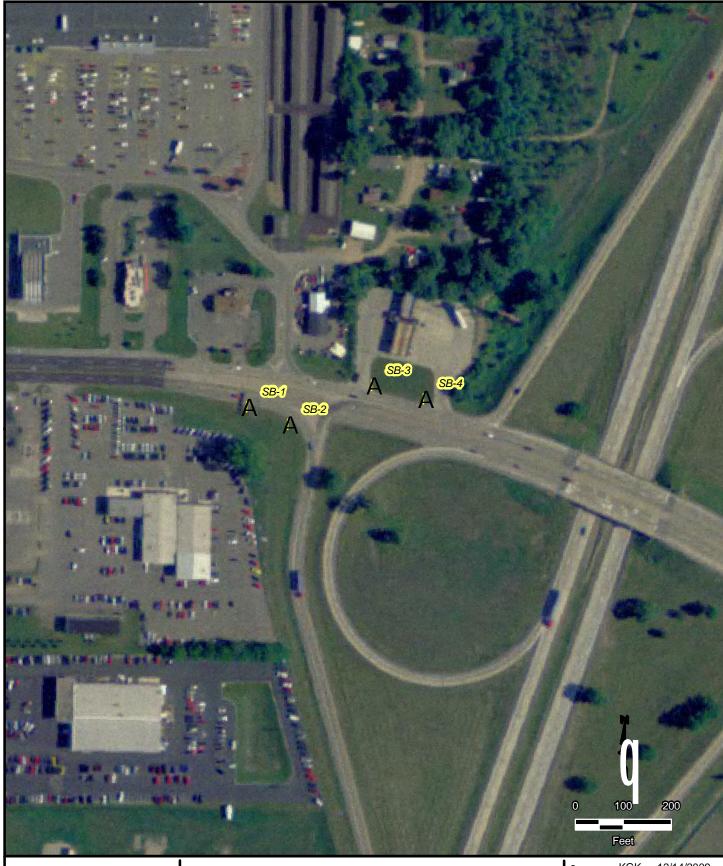
Michigan Department of Transportation, MDOT Office Memorandum, Project Area Contamination Survey (PACS) for M-89 Reconstruction Project in Plainwell, Allegan County, August 10, 2009

AECOM

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PROJECT SITE LOCATION AND LOCATION OF SAMPLING POINTS

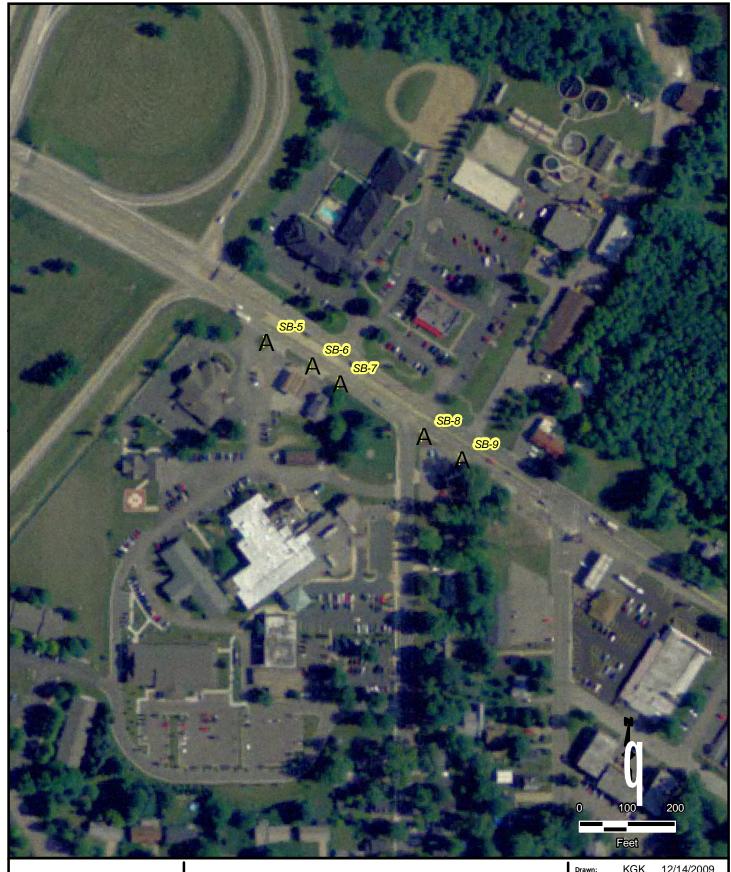
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Drawn:		KGK	12/14/2009
	Approved:	ARB	12/15/2009
	Scale:	AS SH	OWN
ė	PROJECT	6010	3292





GEOPROBE SAMPLE LOCATIONS 1149 AND 1186 EAST M-89

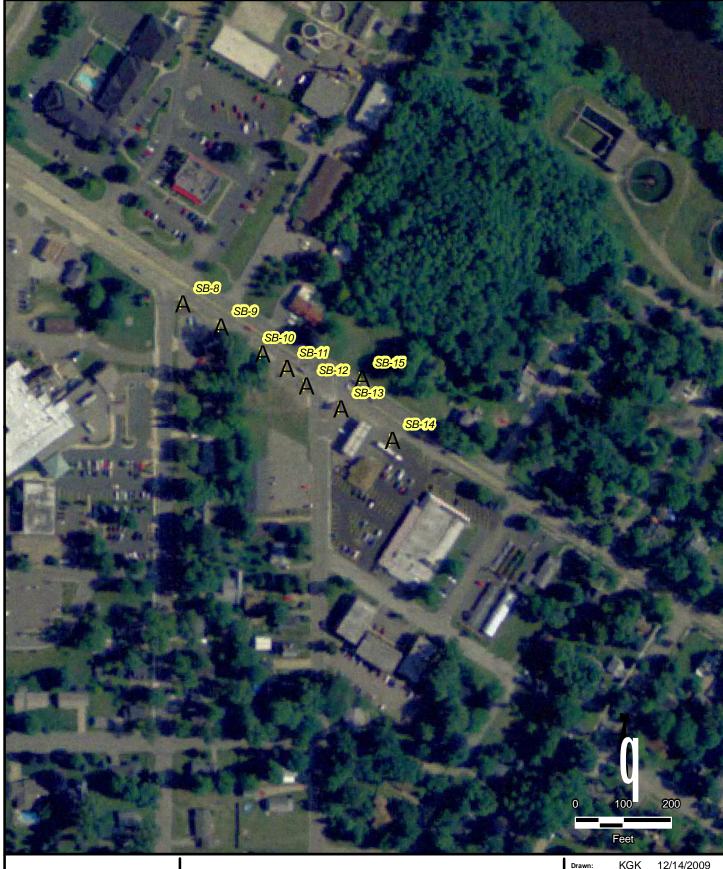
Drawn:	KGK	12/14/2009		
Approved:	ARB	12/15/2009		
Scale:	AS SH	IOWN		
PROJECT NUMBER	60103292			
FIGURE NUMBER	2			





GEOPROBE SAMPLE LOCATIONS665 AND 623 ALLEGAN STREET

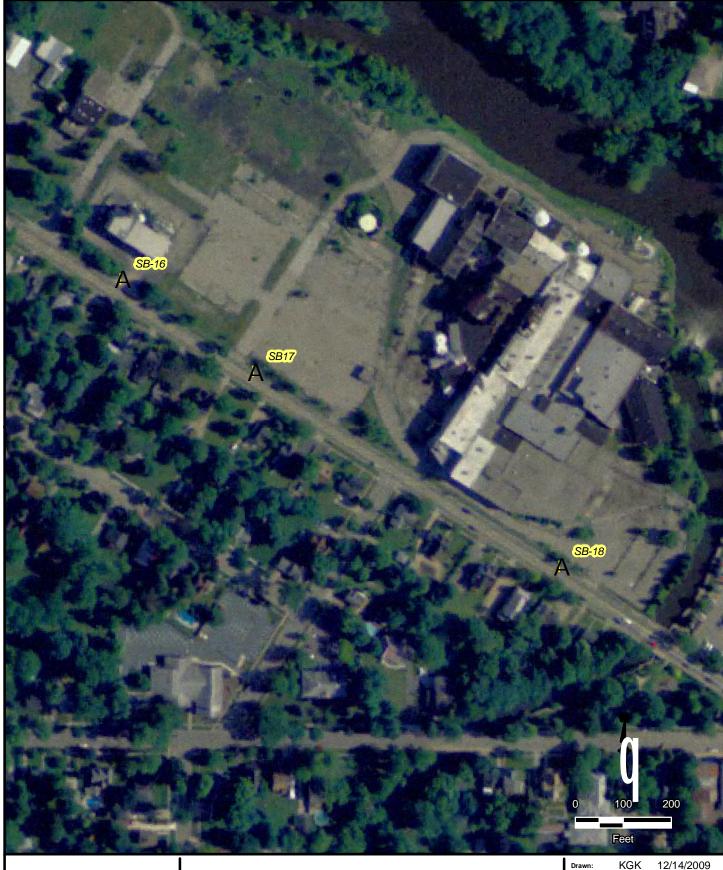
Drawn:	NGN	12/14/2009
Approved:	ARB	12/15/2009
Scale:	AS SH	OWN
PROJECT NUMBER	6010)3292





GEOPROBE SAMPLE LOCATIONS 601 AND 551 ALLEGAN STREET

Drawn:	NGN	12/14/2009
Approved:	ARB	12/15/2009
Scale:	AS SH	OWN
PROJECT NUMBER	6010	03292





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Drawn:	KGK	12/14/2009		
Approved:	ARB	12/15/2009		
Scale:	AS SHOWN			
PROJECT NUMBER	6010	03292		
FIGURE NUMBER	5			





SEDIMENT SAMPLE LOCATIONS KALAMAZOO RIVER MILL RACE

Drawn:	KGK	12/14/2009		
Approved:	ARB	12/15/2009		
Scale:	AS SHOWN			
PROJECT NUMBER	60103292			
FIGURE NUMBER	6			





GEOPROBE SAMPLE LOCATIONS 200 BLOCK EAST BRIDGE STREET

Drawn:	NGN	12/14/2009
Approved:	ARB	12/15/2009
Scale:	AS SH	OWN
PROJECT NUMBER	6010	03292

TABLE 1
Summary of Proposed Subsurface Exploration
M-89 Preliminary Site Investigation, Plainwell, Allegan County, MI
AECOM Project No. 60103292

	ALGORIT TOJECTIO: 00100252					
LOCATION	NUMBER OF BORINGS	PROPOSED DEPTH	SAMPLES	RATIONALE	ANALYTICAL	NOTES
Admiral gas station, 1149 E. M-89, West side of US-131 interchange	2 borings	20 feet	2 soil samples, 1 groundwater if encountered	Active gasoline filling station	Petroleum VOCs (8260), PNAs (8270)	Immediately west of US-131 exit ramp.
Harold Zeigler Chrysler dealership, 1186 E. M-89	2 borings	20 feet	2 soil samples, 1 groundwater if encountered	Active auto dealership and repair facility.	Petroleum VOCs (8260), PNAs (8270), Cd, Cr, Pb	Two borings at eastern end of site, nearest to US-131 interchange.
Admiral gas station, 665 Allegan Street (M- 89)	3 borings	20 feet	3 soil samples, 1 groundwater if encountered	Active gasoline filling station, open LUST (Part 213) site	Petroleum VOCs (8260), PNAs (8270)	Site with approximately 175 feet of frontage on M-89
Vacant lot, 623 Allegan Street (M-89)	2 borings	20 feet	2 soil samples, 1 groundwater if encountered	Waste oil site and former gasoline station.	Petroleum VOCs (8260), PNAs (8270), Cd, Cr, Pb	Waste oil site (Part 201) and former gasoline station. 3 monitoring wells present on site.
Vacant lot, 601 Allegan Street (M-89)	3 borings	20 feet	3 soil samples, 1 groundwater if encountered	Former gasoline filling station	Petroleum VOCs (8260), PNAs (8270)	Former gas station site adjacent to waste oil site (above)
Wesco gas station, 551 Allegan Street (M- 89)	3 borings	20 feet	3 soil samples, 1 groundwater if encountered	Active gasoline filling station	Petroleum VOCs (8260), PNAs (8270)	Two borings on Wesco site, one across M-89 to the north, where a monitoring well currently exists.
Plainwell Paper Mill	3 borings	20 feet	3 soil samples, 1 groundwater if encountered	Former paper mill, Part 201 and Superfund site.	Full Scan VOCs (8260), PNAs (8270), 10 Metals, PCBs	Three borings proposed along north side of M-89. Some monitoring wells visible along fenceline.

TABLE 1
Summary of Proposed Subsurface Exploration
M-89 Preliminary Site Investigation, Plainwell, Allegan County, MI
AECOM Project No. 60103292

LOCATION	NUMBER OF BORINGS	PROPOSED DEPTH	SAMPLES	RATIONALE	ANALYTICAL	NOTES
Kalamazoo River Mill Race	4 sediment samples	2 feet	4 sediment	· ·	PNAs (8270), 10 Metals, PCBs	Collect as many as 4 sediment samples from bottom of stream, adjacent to existing bridge structure
SBC Communications facility, 200 Block of East Bridge Street	1 boring		idrolindwater it	•	Petroleum VOCs (8260), PNAs (8270)	Generator building approximately 120 feet south of Bridge Street.

TABLE 2 Summary of Soil and Groundwater Sampling Points M-89 - Plainwell, Allegan County, Michigan

Boring Number	Total Depth (ft)	Approximate Surface Elevation (ft) *	Depth to Groundwater (ft)	Approximate Groundwater Elevation (ft)	Location - Address	MDOT Station	Samples
SB-1	20	NA	Not Encountered		North side of M-89, east end of 1149 East M-89 property (Admiral gasoline station)	NA	Soil sample at 12-12.5 feet bgs
SB-2	20	NA	Not Encountered		North side of M-89, west end of 1149 East M-89 property (Admiral gasoline station)	NA	Soil sample at 17-18 feet bgs
SB-3	20	NA	Not Encountered		South side of M-89, east end of 1186 East M-89 property (Harold Zeigler Chrysler dealership)	NA	Soil sample at 10-11 feet bgs
SB-4	20	NA	Not Encountered		South side of M-89, west end of 1186 East M-89 property (Harold Zeigler Chrysler dealership)	NA	Soil sample at 4-5 feet bgs
SB-5	20	NA	19.0		South side of M-89, west end of 665 Allegan Street (M-89) property (Admiral gasoline station)	NA	Soil sample at 18-19 feet bgs
SB-6	20	NA	17.5		South side of M-89, middle portion of 665 Allegan Street (M-89) property (Admiral gasoline station)	NA	Soil sample at 1-2 feet bgs, groundwater from 15-20 feet bgs
SB-7	20	NA	16.5		South side of M-89, east end of 665 Allegan Street (M-89) property (Admiral gasoline station)	NA	Soil sample at 16-16.5 feet bgs
SB-8	15	NA	14.5		South side of M-89, west end of 623 Allegan Street (M-89) property (former gasoline station and waste oil site)	NA	Soil sample at 4-5 feet bgs
SB-9	20	NA	14.0		South side of M-89, east end of 623 Allegan Street (M-89) property (former gasoline station and waste oil site)	NA	Soil sample at 5-5.5 feet bgs, groundwater from 12-17 feet bgs
SB-10	15	NA	14.0		South side of M-89, west end of 601 Allegan Street (M-89) property (former gasoline station)	NA	Soil sample at 0.5-1.5 feet bgs
SB-11	15	NA	13.0		South side of M-89, middle portion of 601 Allegan Street (M-89) property (former gasoline station)	NA	Soil sample at 2-3 feet bgs
SB-12	20	NA	14.0		South side of M-89, east end of 601 Allegan Street (M-89) property (former gasoline station)	NA	Soil sample at 3-4 feet bgs, groundwater from 12-17 feet bgs
SB-13	15	NA	13.0		South side of M-89, west end of 551 Allegan Street (M-89) property (Wesco gasoline station)	NA	Soil sample at 2-3 feet bgs
SB-14	15	NA	14.0		South side of M-89, east end of 551 Allegan Street (M-89) property (Wesco gasoline station)	NA	Soil sample at 3-4 feet bgs
SB-15	15	NA	13.5		North side of M-89, across road from 551 Allegan Street (M-89) property (Wesco gasoline station) and adjacent to existing monitor well	NA	Soil sample at 5-6 feet bgs, groundwater from 10-15 feet bgs

TABLE 2 Summary of Soil and Groundwater Sampling Points M-89 - Plainwell, Allegan County, Michigan

Boring Number	Total Depth (ft)	Approximate Surface Elevation (ft) *	Depth to Groundwater (ft)	Approximate Groundwater Elevation (ft)	Location - Address	MDOT Station	Samples
SB-16	15	NA	12.0		North side of M-89 (Allegan Street), east end of former Plainwell Paper Mill property	NA	Soil sample at 9-9.7 feet bgs
SB-17	15	NA	13.0		North side of M-89 (Allegan Street), middle portion of former Plainwell Paper Mill property	NA	Soil sample at 12-13 feet bgs, groundwater from 10-15 feet bgs
SB-18	15	NA	11.5		North side of M-89 (Allegan Street), west end of former Plainwell Paper Mill property	NA	Soil sample at 4-4.5 feet bgs
SB-19	15	NA	11.5		South side of M-89 (East Bridge Street), middle portion of SBC Communications building located in 200 block of East Bridge Street	NA	Soil sample at 1-2 feet bgs, groundwater at 10-15 feet bgs
SS-1	~0.5	NA	NA		Northwest corner of Kalamazoo River Mill Race bridge (Allegan Street)	NA	Sediment sample
SS-2	~0.5	NA	NA		Northeast corner of Kalamazoo River Mill Race bridge (Allegan Street)	NA	Sediment sample
SS-3	~0.5	NA	NA		Southwest corner of Kalamazoo River Mill Race bridge (Allegan Street)	NA	Sediment sample
SS-4	~0.5	NA	NA		Southeast corner of Kalamazoo River Mill Race bridge (Allegan Street)	NA	Sediment sample

^{*} Detailed MDOT project plans not available to AECOM at the time of this PSI, so surface elevation and MDOT Stationing is not available.

TABLE 3
SOIL SAMPLE ANALYTICAL RESULTS - FULL SCAN VOCs
M-89 - Plainwell, Allegan County, Michigan

	III 00 T Idii	iwell, Allegan	oounty, mion	Part 201 Generic Residential Cleanup Criteria*		
Sample ID	SB-16	SB-17	SB-18	Drinking	Direct	
Depth (feet)	9-9.7	12-13	4-5	Water	Contact	
Date Collected	11/13/09	11/13/09	11/13/09	Protection	Criteria	
Volatiles by 8260 (μg/Kg)	Conc.	Conc.	Conc.			
Acetone	<1,000	<1,000	<1,000	15,000	23,000,000	
Acrylonitrile	<100	<100	<100	52	16,000	
Benzene	<50	<50	<50	100	180,000	
Bromobenzene	<100	<100	<100	550	540,000	
Bromochloromethane	<100	<100	<100	No Criteria	a Available	
Bromodichloromethane	<100	<100	<100	2,000	110,000	
Bromoform	<100	<100	<100	2,000	820,000	
Bromomethane	<200	<200	<200	200	320,000	
2-Butanone	<750	<750	<750	260,000	27,000,000	
n-Butylbenzene	<50	<50	<50	1,600	2,500,000	
sec-Butylbenzene	<50	<50	<50	1,600	2,500,000	
tert-Butylbenzene	<50	<50	<50	1,600	2,500,000	
Carbon Disulfide	<250	<250	<250	16,000	280,000	
Carbon Tetrachloride	<50	<50	<50	100	96,000	
Chlorobenzene	<50	<50	<50	2,000	260,000	
Chloroethane	<250	<250	<250	8,600	950,000	
Chloroform	<50	<50	<50	2,000	1,200,000	
Chloromethane	<250	<250	<250	5,200	1,100,000	
2-Chlorotoluene	<50	<50	<50	3,300	500,000	
Dibromochloromethane	<100	<100	<100	2,000	110,000	
1,2-Dibromo-3-chloropropane	<10	<10	<10	4	1,200	
Dibromomethane	<250	<250	<250	1,600	2,000,000	
1,2-Dichlorobenzene	<100	<100	<100	14,000	210,000	
1,3-Dichlorobenzene	<100	<100	<100	170	170,000	
1,4-Dichlorobenzene	<100	<100	<100	1,700	400,000	
Dichlorodifluoromethane	<250	<250	<250	95,000	1,000,000	
1,1-Dichloroethane	<50	<50	<50	18,000	890,000	
1,2-Dichloroethane	<50	<50	<50	100	91,000	
1,1-Dichloroethene	<50	<50	<50	140	200,000	
cis-1,2-Dichloroethene	<50	<50	<50	1,400	640,000	
trans-1,2-Dichloroethene	<50	<50	<50	2,000	1,400,000	
1,2-Dichloropropane	<50	<50	<50	100	140,000	

TABLE 3
SOIL SAMPLE ANALYTICAL RESULTS - FULL SCAN VOCs
M-89 - Plainwell, Allegan County, Michigan

		,	,	Part 201 Residential Cl	Generic eanup Criteria*
Sample ID	SB-16	SB-17	SB-18	Drinking	Direct
Depth (feet)	9-9.7	12-13	4-5	Water	Contact
Date Collected	11/13/09	11/13/09	11/13/09	Protection	Criteria
Volatiles by 8260 (μg/Kg)	Conc.	Conc.	Conc.		
cis-1,3-Dichloropropene	<50	<50	<50	170	10,000
trans-1,3-Dichloropropene	<50	<50	<50	170	10,000
Ethylbenzene	<50	<50	<50	1,500	140,000
Ethylene Dibromide	<20	<20	<20	250	250
2-Hexanone	<2,500	<2,500	<2,500	20,000	2,500,000
Iodomethane	<100	<100	<100	No Criteria	a Available
Isopropylbenzene	<250	<250	<250	91,000	390,000
4-Methyl-2-Pentanone	<2,500	<2,500	<2,500	36,000	2,700,000
Methylene Chloride	<100	<100	<100	100	1,300,000
MTBE	<250	<250	<250	800	1,500,000
Naphthalene	<330	<330	<330	35,000	16,000,000
n-Propylbenzene	<100	<100	<100	1,600	2,500,000
Styrene	<50	<50	<50	2,700	400,000
1,1,1,2-Tetrachloroethane	<100	<100	<100	1,500	440,000
1,1,2,2-Tetrachloroethane	<50	<50	<50	170	53,000
Tetrachloroethene	<50	<50	<50	100	88,000
Toluene	<50	<50	<50	16,000	250,000
1,2,4-Trichlorobenzene	<330	<330	<330	4,200	990,000
1,1,1-Trichloroethane	<50	<50	<50	4,000	460,000
1,1,2-Trichloroethane	<50	<50	<50	100	180,000
Trichloroethene	<50	<50	<50	100	500,000
Trichlorofluoromethane	<100	<100	<100	52,000	560,000
1,2,3-Trichloropropane	<100	<100	<100	840	830,000
1,2,3-Trimethylbenzene	<100	<100	<100	No Criteria Available	
1,2,4-Trimethylbenzene	<100	<100	<100	2,100	110,000
1,3,5-Trimethylbenzene	<100	<100	<100	1,800	94,000
Vinyl Chloride	<40	<40	<40	40	3,800
Total Xylenes	<150	<150	<150	5,600	150,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006 NA = Not Analyzed

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - PETROLEUM VOCs
M-89 - Plainwell, Allegan County, Michigan

					-			Generic eanup Criteria*
Sample ID	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	Drinking	Direct
Depth (feet)	12-12.5	17-18	4-5	10-11	18-19	1-2	Water	Contact
Date Collected	11/12/09	11/12/09	11/12/09	11/12/09	11/13/09	11/13/09	Protection	Criteria
Volatiles by 8260 (μg/Kg)	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.		
Benzene	<50	<50	<50	<50	<50	<50	100	180,000
Ethylbenzene	<50	<50	<50	<50	<50	<50	1,500	140,000
MTBE	<250	<250	<250	<250	<250	<250	800	1,500,000
Naphthalene	<330	<330	<330	<330	<330	<330	35,000	16,000,000
Toluene	<50	<50	<50	<50	<50	<50	16,000	250,000
1,2,3-Trimethylbenzene	<100	<100	<100	<100	<100	<100	No Criteri	a Available
1,2,4-Trimethylbenzene	<100	<100	<100	<100	<100	<100	2,100	110,000
1,3,5-Trimethylbenzene	<100	<100	<100	<100	<100	<100	1,800	94,000
Total Xylenes	<150	<150	<150	<150	<150	<150	5,600	150,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

NA = Not Analyzed

Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - PETROLEUM VOCs
M-89 - Plainwell, Allegan County, Michigan

				-	-			Generic eanup Criteria*
Sample ID	SB-7	SB-8	SB-9	SB-10	SB-11	SB-12	Drinking	Direct
Depth (feet)	16-16.5	4-5	5-5.5	0.5-1.5	2-3	3-4	Water	Contact
Date Collected	11/13/09	11/12/09	11/12/09	11/12/09	11/12/09	11/12/09	Protection	Criteria
Volatiles by 8260 (μg/Kg)	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.		
Benzene	<50	<50	<50	<50	<50	<50	100	180,000
Ethylbenzene	<50	<50	<50	<50	<50	<50	1,500	140,000
MTBE	<250	<250	<250	<250	<250	<250	800	1,500,000
Naphthalene	<330	<330	<330	<330	<330	<330	35,000	16,000,000
Toluene	<50	<50	<50	<50	<50	<50	16,000	250,000
1,2,3-Trimethylbenzene	<100	<100	<100	<100	<100	<100	No Criteri	a Available
1,2,4-Trimethylbenzene	<100	<100	<100	<100	<100	<100	2,100	110,000
1,3,5-Trimethylbenzene	<100	<100	<100	<100	<100	<100	1,800	94,000
Total Xylenes	<150	<150	<150	<150	<150	<150	5,600	150,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

NA = Not Analyzed

Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS - PETROLEUM VOCs
M-89 - Plainwell, Allegan County, Michigan

					Part 201 Generic Residential Cleanup Criteria*		
Sample ID	SB-13	SB-14	SB-15	SB-19	Drinking	Direct	
Depth (feet)	2-3	3-4	5-6	1-2	Water	Contact	
Date Collected	11/13/09	11/13/09	11/13/09	11/13/09	Protection	Criteria	
Volatiles by 8260 (μg/Kg)	Conc.	Conc.	Conc.	Conc.			
Benzene	<50	<50	<50	<50	100	180,000	
Ethylbenzene	<50	<50	<50	<50	1,500	140,000	
MTBE	<250	<250	<250	<250	800	1,500,000	
Naphthalene	<330	<330	<330	<330	35,000	16,000,000	
Toluene	<50	<50	<50	<50	16,000	250,000	
1,2,3-Trimethylbenzene	<100	<100	<100	<100	No Criteria Available		
1,2,4-Trimethylbenzene	<100	<100	<100	<100	2,100	110,000	
1,3,5-Trimethylbenzene	<100	<100	<100	<100	1,800	94,000	
Total Xylenes	<150	<150	<150	<150	5,600	150,000	

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006 NA = Not Analyzed

TABLE 5
SOIL SAMPLE ANALYTICAL RESULTS - PNAs
M-89 - Plainwell, Allegan County, Michigan

								Generic leanup Criteria*
Sample ID	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	Drinking	Direct
Depth (feet)	12-12.5	17-18	4-5	10-11	18-19	1-2	Water	Contact
Date Collected	11/12/09	11/12/09	11/12/09	11/12/09	11/13/09	11/13/09	Protection	Criteria
PNAs by 8270 (μg/Kg)	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.		
Acenaphthene	<330	<330	<330	<330	<330	<330	300,000	41,000,000
Acenaphthylene	<330	400	<330	<330	<330	<330	5,900	1,600,000
Anthracene	<330	700	<330	<330	<330	<330	41,000	230,000,000
Benzo(a)anthracene	<330	4,200	<330	<330	<330	<330	NLL	20,000
Benzo(a)pyrene	<330	4,000	<330	<330	<330	<330	NLL	2,000
Benzo(b)fluoranthene	370	5,600	<330	<330	<330	<330	NLL	20,000
Benzo(ghi)perylene	<330	1,700	<330	<330	<330	<330	NLL	2,500,000
Benzo(k)fluoranthene	<330	2,100	<330	<330	<330	<330	NLL	200,000
Chrysene	<330	3,800	<330	<330	<330	<330	NLL	2,000,000
Dibenzo(a,h)anthracene	<330	770	<330	<330	<330	<330	NLL	2,000
Fluoranthene	870	8,400	<330	<330	<330	<330	730,000	46,000,000
Fluorene	<330	<330	<330	<330	<330	<330	390,000	27,000,000
Indeno(1,2,3-cd)pyrene	<330	1,900	<330	<330	<330	<330	NLL	20,000
2-Methylnaphthalene	<330	<330	<330	<330	<330	<330	57,000	8,100,000
Phenanthrene	<330	3,400	<330	<330	<330	<330	56,000	1,600,000
Pyrene	970	6,900	<330	<330	<330	<330	480,000	29,000,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

NLL = Not Likely to Leach

Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 5
SOIL SAMPLE ANALYTICAL RESULTS - PNAs
M-89 - Plainwell, Allegan County, Michigan

							Part 201 Generic Residential Cleanup Criteria*	
Sample ID	SB-7	SB-8	SB-9	SB-10	SB-11	SB-12	Drinking	Direct
Depth (feet)	16-16.5	4-5	5-5.5	0.5-1.5	2-3	3-4	Water	Contact
Date Collected	11/13/09	11/12/09	11/12/09	11/12/09	11/12/09	11/12/09	Protection	Criteria
PNAs by 8270 (μg/Kg)	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.		
Acenaphthene	<330	<330	<330	<330	<330	<330	300,000	41,000,000
Acenaphthylene	<330	<330	<330	<330	<330	<330	5,900	1,600,000
Anthracene	<330	<330	<330	<330	<330	<330	41,000	230,000,000
Benzo(a)anthracene	<330	<330	<330	<330	<330	<330	NLL	20,000
Benzo(a)pyrene	<330	<330	<330	<330	<330	<330	NLL	2,000
Benzo(b)fluoranthene	<330	<330	<330	<330	<330	<330	NLL	20,000
Benzo(ghi)perylene	<330	<330	<330	<330	<330	<330	NLL	2,500,000
Benzo(k)fluoranthene	<330	<330	<330	<330	<330	<330	NLL	200,000
Chrysene	<330	<330	<330	<330	<330	<330	NLL	2,000,000
Dibenzo(a,h)anthracene	<330	<330	<330	<330	<330	<330	NLL	2,000
Fluoranthene	<330	<330	<330	<330	<330	<330	730,000	46,000,000
Fluorene	<330	<330	<330	<330	<330	<330	390,000	27,000,000
Indeno(1,2,3-cd)pyrene	<330	<330	<330	<330	<330	<330	NLL	20,000
2-Methylnaphthalene	<330	<330	<330	<330	<330	<330	57,000	8,100,000
Phenanthrene	<330	<330	<330	<330	380	<330	56,000	1,600,000
Pyrene	<330	<330	<330	<330	<330	<330	480,000	29,000,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

NLL = Not Likely to Leach

Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 5
SOIL SAMPLE ANALYTICAL RESULTS - PNAs
M-89 - Plainwell, Allegan County, Michigan

								Generic leanup Criteria*
Sample ID	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18	Drinking	Direct
Depth (feet)	2-3	3-4	5-6	9-9.7	12-13	4-5	Water	Contact
Date Collected	11/13/09	11/13/09	11/13/09	11/13/09	11/13/09	11/13/09	Protection	Criteria
PNAs by 8270 (μg/Kg)	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.		
Acenaphthene	<330	<330	<330	<330	<330	<330	300,000	41,000,000
Acenaphthylene	<330	<330	<330	<330	<330	<330	5,900	1,600,000
Anthracene	<330	<330	<330	<330	<330	<330	41,000	230,000,000
Benzo(a)anthracene	<330	<330	<330	<330	<330	<330	NLL	20,000
Benzo(a)pyrene	<330	<330	<330	<330	<330	<330	NLL	2,000
Benzo(b)fluoranthene	<330	<330	<330	<330	<330	<330	NLL	20,000
Benzo(ghi)perylene	<330	<330	<330	<330	<330	<330	NLL	2,500,000
Benzo(k)fluoranthene	<330	<330	<330	<330	<330	<330	NLL	200,000
Chrysene	<330	<330	<330	<330	<330	<330	NLL	2,000,000
Dibenzo(a,h)anthracene	<330	<330	<330	<330	<330	<330	NLL	2,000
Fluoranthene	<330	<330	<330	<330	<330	<330	730,000	46,000,000
Fluorene	<330	<330	<330	370	<330	<330	390,000	27,000,000
Indeno(1,2,3-cd)pyrene	<330	<330	<330	<330	<330	<330	NLL	20,000
2-Methylnaphthalene	<330	<330	<330	<330	<330	<330	57,000	8,100,000
Phenanthrene	<330	<330	<330	<330	<330	<330	56,000	1,600,000
Pyrene	<330	<330	<330	<330	<330	<330	480,000	29,000,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

NLL = Not Likely to Leach

Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 5
SOIL SAMPLE ANALYTICAL RESULTS - PNAs
M-89 - Plainwell, Allegan County, Michigan

	-		Generic eanup Criteria*
Sample ID	SB-19	Drinking	Direct
Depth (feet)	1-2	Water	Contact
Date Collected	11/13/09	Protection	Criteria
PNAs by 8270 (μg/Kg)	Conc.		
Acenaphthene	<330	300,000	41,000,000
Acenaphthylene	<330	5,900	1,600,000
Anthracene	<330	41,000	230,000,000
Benzo(a)anthracene	<330	NLL	20,000
Benzo(a)pyrene	<330	NLL	2,000
Benzo(b)fluoranthene	<330	NLL	20,000
Benzo(ghi)perylene	<330	NLL	2,500,000
Benzo(k)fluoranthene	<330	NLL	200,000
Chrysene	<330	NLL	2,000,000
Dibenzo(a,h)anthracene	<330	NLL	2,000
Fluoranthene	<330	730,000	46,000,000
Fluorene	<330	390,000	27,000,000
Indeno(1,2,3-cd)pyrene	<330	NLL	20,000
2-Methylnaphthalene	<330	57,000	8,100,000
Phenanthrene	<330	56,000	1,600,000
Pyrene	<330	480,000	29,000,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006 NLL = Not Likely to Leach

TABLE 6
SOIL SAMPLE ANALYTICAL RESULTS - Metals
M-89 - Plainwell, Allegan County, Michigan

								rt 201 Generic eanup Criteria*	
Sample ID	SB-3	SB-4	SB-8	SB-9	SB-16	SB-17	Residential	Residential	Statewide
Depth (feet)	4-5	10-11	4-5	5-5.5	9-9.7	12-13	Drinking Water	Direct Contact	Default
Date Collected	11/12/09	11/12/09	11/12/09	11/12/09	11/13/09	11/13/09	Protection	Criteria	Background
Total Metals (μg/Kg)	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.			
Arsenic	NA	NA	NA	NA	2,300	1,400	4,600	7,600	5,800
Barium	NA	NA	NA	NA	18,000	3,300	1,300,000	37,000,000	75,000
Cadmium	120	250	<50	<50	59	<50	6,000	550,000	1,200
Chromium	10,000	11,000	5,800	7,500	4,600	3,200	1,000,000,000	790,000,000	18,000
Copper	NA	NA	NA	NA	3,400	2,200	5,800,000	20,000,000	32,000
Lead	24,000	27,000	6,000	4,300	2,200	1,300	700,000	400,000	21,000
Mercury	NA	NA	NA	NA	<50	<50	1,700	160,000	130
Selenium	NA	NA	NA	NA	<200	<200	4,000	2,600,000	410
Silver	NA	NA	NA	NA	<100	<100	4,500	2,500,000	1,000
Zinc	NA	NA	NA	NA	11,000	8,000	2,400,000	170,000,000	47,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

NA = Not Analyzed

Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 6
SOIL SAMPLE ANALYTICAL RESULTS - Metals
M-89 - Plainwell, Allegan County, Michigan

			Part 201 Generic Cleanup Criteria*	
Sample ID	SB-18	Residential	Residential	Statewide
Depth (feet)	4-5	Drinking Water	Direct Contact	Default
Date Collected	11/13/09	Protection	Criteria	Background
Total Metals (μg/Kg)	Conc.			
Arsenic	4,000	4,600	7,600	5,800
Barium	49,000	1,300,000	37,000,000	75,000
Cadmium	120	6,000	550,000	1,200
Chromium	6,100	1,000,000,000	790,000,000	18,000
Copper	7,700	5,800,000	20,000,000	32,000
Lead	27,000	700,000	400,000	21,000
Mercury	<50	1,700	160,000	130
Selenium	<200	4,000	2,600,000	410
Silver	<100	4,500	2,500,000	1,000
Zinc	29,000	2,400,000	170,000,000	47,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

TABLE 7
SOIL SAMPLE ANALYTICAL RESULTS - PCBs
M-89 - Plainwell, Allegan County, Michigan

				Part 201 Generic Residential Cleanup Criteria*		
Sample ID	SB-16	SB-17	SB-18	Drinking	Direct	
Depth (feet)	9-9.7	12-13	4-5	Water	Contact	
Date Collected	11/13/09	11/13/09	11/13/09	Protection	Criteria	
PCBs by 8082 (μg/Kg)	Conc.	Conc.	Conc.			
Aroclor-1016	<330	<330	<330	NLL	4,000	
Aroclor-1221	<330	<330	<330	NLL	4,000	
Aroclor-1232	<330	<330	<330	NLL	4,000	
Aroclor-1242	<330	<330	<330	NLL	4,000	
Aroclor-1248	<330	<330	<330	NLL	4,000	
Aroclor-1254	<330	<330	<330	NLL	4,000	
Aroclor-1260	<330	<330	<330	NLL	4,000	
Aroclor-1262	<330	<330	<330	NLL	4,000	
Aroclor-1268	<330	<330	<330	NLL	4,000	

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006 NA = Not Analyzed

TABLE 8 GROUNDWATER SAMPLE ANALYTICAL RESULTS-FULL SCAN VOCs M-89 - Plainwell, Allegan County, Michigan

W-09 - Plailiwe	II, Allegan Count	
		Part 201 Generic
		Cleanup Criteria*
Sample ID	SB-17	Residential
Date Collected	11/13/09	Drinking
		Water
Volatiles by 8260 (μg/L)	Conc.	
Acetone	<50	730
Acrylonitrile	<2.0	2.6
Benzene	<1.0	5
Bromobenzene	<1.0	18
Bromochloromethane	<1.0	No Criteria Available
Bromodichloromethane	<1.0	80
Bromoform	<1.0	80
Bromomethane	<5.0	10
2-Butanone	<25	13,000
n-Butylbenzene	<1.0	80
sec-Butylbenzene	<1.0	80
tert-Butylbenzene	<1.0	80
Carbon Disulfide	<5.0	800
Carbon Tetrachloride	<1.0	5
Chlorobenzene	<1.0	100
Chloroethane	<5.0	430
Chloroform	<3.0	80
Chloromethane	<5.0	260
2-Chlorotoluene	<5.0	150
Dibromochloromethane	<5.0	80
1,2-Dibromo-3-chloropropane	<1.0	No Criteria Available
Dibromomethane	<5.0	80
1,2-Dichlorobenzene	<1.0	600
1,3-Dichlorobenzene	<1.0	6.6
1,4-Dichlorobenzene	<1.0	75
Dichlorodifluoromethane	<5.0	1,700
1,1-Dichloroethane	<1.0	880
1,2-Dichloroethane	<1.0	5
1,1-Dichloroethene	<1.0	7
cis-1,2-Dichloroethene	<1.0	70
trans-1,2-Dichloroethene	<1.0	100
1,2-Dichloropropane	<1.0	5
cis-1,3-Dichloropropene	<1.0	8.5
trans-1,3-Dichloropropene	<1.0	8.5
Ethylbenzene	<1.0	74
Ethylene Dibromide	<1.0	0.05
2-Hexanone	<50	1,000
Methyl Iodide	<5.0	No Criteria Available
Isopropylbenzene	<5.0	800
4-Methyl-2-Pentanone	<50	1,800
Methylene Chloride	<5.0	5
MTBE	<5.0	40
Naphthalene	<5.0	520
n-Propylbenzene	<1.0	80
Styrene	<1.0	100
1,1,1,2-Tetrachloroethane	<1.0	77
1,1,2,2-Tetrachloroethane	<1.0	8.5
·, ·,=,= · · · · · · · · · · · · · · · ·		0.0

TABLE 8
GROUNDWATER SAMPLE ANALYTICAL RESULTS-FULL SCAN VOCs
M-89 - Plainwell, Allegan County, Michigan

		Part 201 Generic								
		Cleanup Criteria*								
Sample ID	SB-17	Residential								
Date Collected	11/13/09	Drinking								
		Water								
Volatiles by 8260 (μg/L)	Conc.									
Tetrachloroethene	<1.0	5								
Toluene	<1.0	790								
1,2,4-Trichlorobenzene	<5.0	70								
1,1,1-Trichloroethane	<1.0	200								
1,1,2-Trichloroethane	<1.0	5								
Trichloroethene	<1.0	5								
Trichlorofluoromethane	<1.0	2,600								
1,2,3-Trichloropropane	<1.0	42								
1,2,3-Trimethylbenzene	<1.0	No Criteria Available								
1,2,4-Trimethylbenzene	<1.0	63								
1,3,5-Trimethylbenzene	<1.0	72								
Vinyl Chloride	<1.0	2								
Total Xylenes	<3.0	280								

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 9
GROUNDWATER SAMPLE ANALYTICAL RESULTS-PETROLEUM VOCs
M-89 - Plainwell, Allegan County, Michigan

		J - I lalliwell,	mogan ooan	iy, imonigan		
						Part 201 Generic Cleanup Criteria*
Sample ID	SB-6	SB-9	SB-12	SB-15	SB-19	Residential
Date Collected	11/13/09	11/13/09	11/12/09	11/13/09	11/13/09	Drinking
						Water
Volatiles by 8260 (μg/L)	Conc.	Conc.	Conc.	Conc.	Conc.	
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	5
Ethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	74
MTBE	<5.0	<5.0	<5.0	<5.0	<5.0	40
Naphthalene	<5.0	<5.0	<5.0	<5.0	<5.0	520
Toluene	<1.0	<1.0	<1.0	<1.0	<1.0	790
1,2,3-Trimethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	No Criteria Available
1,2,4-Trimethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	63
1,3,5-Trimethylbenzene	<1.0	<1.0	<1.0	<1.0	<1.0	72
Total Xylenes	<3.0	<3.0	<3.0	<3.0	<3.0	280

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006 Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 10
GROUNDWATER SAMPLE ANALYTICAL RESULTS - PNAs
M-89 - Plainwell, Allegan County, Michigan

							Part 201 Generic Residential Cleanup Criteria*
Sample ID	SB-6	SB-9	SB-12	SB-15	SB-17	SB-19	Drinking
Date Collected	11/13/09	11/13/09	11/12/09	11/13/09	11/13/09	11/13/09	Water
PNAs by 8270 (μg/L)	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	
Acenaphthene	<5.0	<5.0	<5.0	<5.0	<10	<5.0	1,300
Acenaphthylene	<5.0	<5.0	<5.0	<5.0	<10	<5.0	52
Anthracene	<5.0	<5.0	<5.0	<5.0	<10	<5.0	43
Benzo(a)anthracene	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	2.1
Benzo(a)pyrene	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	5.0
Benzo(b)fluoranthene	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	1.5
Benzo(ghi)perylene	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	1.0
Benzo(k)fluoranthene	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	1.0
Chrysene	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	1.6
Dibenzo(a,h)anthracene	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	2.0
Fluoranthene	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	210
Fluorene	<5.0	<5.0	<5.0	<5.0	<10	<5.0	880
Indeno(1,2,3-cd)pyrene	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	2.0
2-Methylnaphthalene	<5.0	<5.0	<5.0	<5.0	<10	<5.0	260
Phenanthrene	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	52
Pyrene	<5.0	<5.0	<5.0	<5.0	<10	<5.0	140

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006 Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 11
GROUNDWATER SAMPLE ANALYTICAL RESULTS - Metals
M-89 - Plainwell, Allegan County, Michigan

		Part 201 Generic Cleanup Criteria*
Sample ID	SB-17	Drinking
Date Collected	11/13/09	Water
Total Metals (μg/L)	Conc.	
Arsenic	<5.0	10
Barium	<100	2,000
Cadmium	<1.0	5
Chromium	<10	100
Copper	<4.0	1,000
Lead	<3.0	4
Mercury	<0.20	2
Selenium	<5.0	50
Silver	<0.20	34
Zinc	<50	2,400

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 2006

TABLE 12
GROUNDWATER SAMPLE ANALYTICAL RESULTS - PCBs
M-89 - Plainwell, Allegan County, Michigan

	miwell, Allegail O	Part 201 Generic Residential Cleanup Criteria*
Sample ID	SB-17	Residential
Date Collected	11/13/09	Drinking
		Water
PCBs by 8082 (μg/L)	Conc.	
Aroclor-1016	<0.4	0.5
Aroclor-1221	<0.4	0.5
Aroclor-1232	<0.4	0.5
Aroclor-1242	<0.4	0.5
Aroclor-1248	<0.4	0.5
Aroclor-1254	<0.4	0.5
Aroclor-1260	<0.4	0.5
Aroclor-1262	<0.4	0.5
Aroclor-1268	<0.4	0.5

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 23, 2006 NLL = Not Likely to Leach

TABLE 13
SEDIMENT SAMPLE ANALYTICAL RESULTS - Metals
M-89 - Plainwell, Allegan County, Michigan

					Average	Part 201 Generic									
					Concentration	cleanup Criteria*									
Sample ID	SS-1	SS-2	SS-3	SS-4		Residential	Industrial	Statewide							
Date Collected	11/9/09	11/9/09	11/9/09	11/9/09		Drinking Water	Direct Contact	Direct Contact	Default						
						Protection Criteria C		Criteria	Background						
Total Metals (μg/Kg)	Conc.	Conc.	Conc.	Conc.											
Arsenic	1,500	1,900	2,100	2,500	2,000	4,600	5,800								
Barium	25,000	17,000	26,000	32,000	25,000	1,300,000	75,000								
Cadmium	77	92	79	170	105	6,000	550,000	2,100,000	1,200						
Chromium	8,300	8,500	9,000	9,100	8,725	1,000,000,000	790,000,000	1,000,000,000	18,000						
Copper	3,800	4,400	21,000	7,200	9,100	5,800,000	20,000,000	73,000,000	32,000						
Lead	14,000	16,000	11,000	31,000	18,000	700,000	400,000	900,000	21,000						
Mercury	73	<62	<67	<62	120	1,700	160,000	580,000	130						
Selenium	<200	<200	<200	<200	<200	4,000	410								
Silver	<100	<100	<100	<100	<100	4,500 2,500,000 9,000,000 1,00									
Zinc	28,000	29,000	29,000	33,000	29,750	2,400,000	170,000,000	630,000,000	47,000						

^{*} Part 201 Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 23, 2006 Shaded cell indicates concentration exceeds one or more applicable criteria.

TABLE 14
SEDIMENT SAMPLE ANALYTICAL RESULTS - PCBs
M-89 - Plainwell, Allegan County, Michigan

					Part 201 Generic Residential Cleanup Criteria		
Sample ID	SS-1	SS-2	SS-3	SS-4	Drinking	Direct	
Date Collected	11/9/09	11/9/09	11/9/09	11/9/09	Water	Contact	
					Protection	Criteria	
PCBs by 8082 (μg/Kg)	Conc.	Conc.	Conc.	Conc.			
Aroclor-1016	<330	<410	<440	<410	NLL	4,000	
Aroclor-1221	<330	<410	<440	<410	NLL	4,000	
Aroclor-1232	<330	<410	<440	<410	NLL	4,000	
Aroclor-1242	<330	<410	<440	<410	NLL	4,000	
Aroclor-1248	<330	<410	<440	<410	NLL	4,000	
Aroclor-1254	<330	<410	<440	<410	NLL	4,000	
Aroclor-1260	<330	<410	<440	<410	NLL	4,000	
Aroclor-1262	<330	<410	<440	<410	NLL	4,000	
Aroclor-1268	<330	<410	<440	<410	NLL	4,000	

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 23, 2006 NLL = Not Likely to Leach

TABLE 15
SEDIMENT SAMPLE ANALYTICAL RESULTS - PNAs
M-89 - Plainwell, Allegan County, Michigan

						Generic leanup Criteria*
Sample ID	SS-1	SS-2	SS-3	SS-4	Drinking	Direct
Date Collected	11/9/09	11/9/09	11/9/09	11/9/09	Water	Contact
					Protection	Criteria
PNAs by 8270 (μg/Kg)	Conc.	Conc.	Conc.	Conc.		
Acenaphthene	<470	<410	<440	<410	300,000	41,000,000
Acenaphthylene	<470	<410	<440	<410	5,900	1,600,000
Anthracene	<470	<410	670	<410	41,000	230,000,000
Benzo(a)anthracene	860	<410	1,300	<410	NLL	20,000
Benzo(a)pyrene	940	<410	780	<410	NLL	2,000
Benzo(b)fluoranthene	1,300	<410	960	<410	NLL	20,000
Benzo(ghi)perylene	640	<410	<440	<410	NLL	2,500,000
Benzo(k)fluoranthene	<470	<410	<440	<410	NLL	200,000
Chrysene	860	<410	890	<410	NLL	2,000,000
Dibenzo(a,h)anthracene	<470	<410	<440	<410	NLL	2,000
Fluoranthene	2,400	<410	2,400	<410	730,000	46,000,000
Fluorene	<470	<410	<440	<410	390,000	27,000,000
Indeno(1,2,3-cd)pyrene	530	<410	<400	<410	NLL	20,000
2-Methylnaphthalene	<470	<410	<440	<410	57,000	8,100,000
Naphthalene	<470	<410	<440	<410	35,000	16,000,000
Phenanthrene	1,500	<410	1,200	<410	56,000	1,600,000
Pyrene	1,800	<410	1,700	<410	480,000	29,000,000

^{*} Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 23, 2006 NLL = Not Likely to Leach

	MDOT								LC	LOG OF BORING NUMBER SB-1									
	AE	C	NC	1	F	PROJE	CT NAME			Al	ECOM F	IELD	REPRI	ESENTA	ATIVE				
	ITE LOC	`AT1)NI			M-89	PSI							○ UN	ICONE	INFD C	OMPRES	SIVE S	TRENGTH
	Plai			MI								(RQD	PM)		NS/FT	2	3	4	STRENGTH 5
TENTE OF THE PERSON OF THE PER	ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	LE DISTANCE	RECOVERY %	.S. CODE		DES	SCRIPTION OF MA	TERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	PLAS LIMI ×	⊤ % ← — -	CON 	ATER TENT % — — —		LIQUID LIMIT % —A 50
2		SAMP	SAMP	SAMP	RECC	U.S.C.	SURFACE E	LEVATIO	 N			Rock	PHOT	8		STAND PENET 20	RATION 30	BLOW 40	/S/FT. 50
	5.0	1	GP		Ī	SW	0.5	Topsoil. Brown silt	ty fine-medium sand	-			0				30	10	30
	10.0	2	GP			SW SP-SN	• • • • • 6.5 • • • •		e-medium sand, so vn silty fine sand, tra	_	el.		0						
		3	GP			SW	14.0	piece note	e-medium sand, tra ed @ 12.5' bgs.	ce silt. Asphalt			0						
E	15.0			Ħ	Ħ	SP-SN	1.0.0.0.		vn silty fine sand. e-medium sand, tra	ce silt	_							-	
	20.0	4	GP			SW	20.0						0						
								EOB 20' b	ogs.										
								Collected	soil sample rom 12	-12.5' bgs.									
CRAIG.LOG 60103292 MDOT PLAINWELL.GPJ STS.GDT 12/23/09 S S									with cuttings and b										
103292			The s	stra	atifi	cation	lines represe	nt the app	proximate boundary	lines between s	oil types						gradua	il.	
06 601 M	Not	enc	ount	ter	ed				BORING STARTED 11 BORING COMPLETED	/12/09			OM OFF		_	sing EET NO	. 0		
AlG.LC									RIG/FOREMAN	/12/09			ERED BY	5			1 B NO.	1	
WL RIG/FOREMAN Fibertec - 6620DT/										c - 6620DT/	APP'D BY AECOM JOB NO. 60103292								

AFCON	MDC		LOG OF BORING NUMBER SB-10									
AECOM		CT NAME		AECOM	FIELD	REPRI						
SITE LOCATION Plainwell, MI					(RQD)	PM)	-()-UI T(NCONFI DNS/FT.	NED CO	WPRESS	SIVE STR	RENGTH
DEPTH(FT) ELEVATION(FT) SAMPLE NO. SAMPLE TYPE SAMPLE DISTANCE	RECOVERY % U.S.C.S. CODE	DES	SCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	1	T % ← — — 0 :	CONT		_ LIMI _ — —	
SAM	NEC U.S.(SURFACE ELEVATION			Rock	PHO	1) 0 :	PENETE	RATION I	BLOWS/I 10 5	/FT. 50
1 GP	SP-SM	3.5	vn fine silty sand, trace gravel.			0						
2 GP		າ: -,1,1,15.5 ໃຈ : • : Tan fine-ເ	coarse sand with gravel, trace silt @ 14' bgs.	-		0						
3 GP	T sw	* * * * * * * * * * * * * * * 15.0				0						
The strat WL WL			elle collected from 0.5-1.5' bgs. with cuttings and bentonite.									
The strat	tification	lines represent the app	proximate boundary lines between BORING STARTED	soil type	_	Situ, th				gradual.	-	
14' WS			11/12/09 BORING COMPLETED 11/12/09			ERED BY		SHE	EET NO.	OF		
WL			11/12/09 RIG/FOREMAN Fibertec - 6620DT/			D BY	5		COM JOE	1 3 NO. 601032	1 292	

		<u> </u>	_		LIENT			LOG OF BORING NUMBER SB-11								
AE	:Cl	UN	Ŋ	F	ROJE	CT NAME PSI		AECOM	1 FIELD	REPR	RESENTATIVE					
SITE LO Plai			MI		WI-03	1 01			(RQD)	(M ^c	-O-U	NCONFI ONS/FT.	NED CO 2 2	MPRESS	SIVE STRE	ENGTH
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE		U.S.C.S. CODE	DE	SCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	LIM) 1	-	CONT (+ ARD	LIQU LIMI' — — <u>-</u> 2	T % 2 0
\times	SAN	SAN	SAN	REC	U.S.	SURFACE ELEVATIO	N		Roc	PHC	1	⊗ 0 :	PENETF 20 3	RATION I	BLOWS/F	-T. 0
	1	GP		<u> </u>	SP-SM	4.0	wn fine silty sand, trace gravel.			0						
5.0	2	GP		Ţ Ţ	SP-SM	6.0 Tan fine-	d fine silty sand. coarse sand with gravel, trace sil d @ 13' bgs.	t.		0						
15.0	3	GP			SW	15.0				0						
							bgs. ple collected from 2-3' bgs. d with cuttings and bentonite.									
		The	stra	atifi	cation	lines represent the ap	proximate boundary lines betwee	n soil typ	_			sition n	nay be	gradual		
	'ws						BORING STARTED 11/12/09			OM OFF		Lan				
WL							BORING COMPLETED 11/12/09		_	ERED B	Ý S		EET NO.	1 OF	1	
The stratification lines represent the approximate bound. WL 13' WS WL BORING STARTEI BORING COMPLE WL RIG/FOREMAN Fibe					RIG/FOREMAN Fibertec - 6620DT/		APP'D BY AECOM JOB NO. 60103292				92					

	AECOM CLIENT MDOT PROJECT NAME							LOG OF BORING NUMBER SB-12								
			۷Į	- 1		CT NAME PSI		AECOM	FIELD	REPR						
SITE LOC Plai			MI						(RQD)	PM)	-O-UNI	CONFIN NS/FT. ²	NED COI	MPRESS	SIVE STR	ENGTH
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	MPLE DISTANCE	RECOVERY %	U.S.C.S. CODE	DE	SCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	PLAS LIMIT X 10	% - — — 2	CONT O 3 STANDA	+ ∖RD	LIMI — — — — 5	<u>\$</u> 50 +
\times	SA	SA	SA	RE	U.S	SURFACE ELEVATION Topsoil.	N .		So.	H H	10				BLOWS/I I0 5	F1. 50
5.0	1	GP			CL		d sandy clay with silt, trace grave	el.		0						
10.0	2	GP			SW-SI	Brown fir Saturated	ne-coarse sand with silt and grave d @ 14' bgs.	el.		0						
15.0	3	GP			SW	14.5 14.5 14.50 Tan gray	elly fine-medium sand, some silt.			0						
20.0	4	GP			SW	Gray gra	velly fine-coarse sand grading to the depth. Mild organic odor.			0						
						Groundw PVC moi	ple collected from 3-4' bgs. vater collected through 1" tempora nitoring well screened from 12-17 d with cuttings and bentonite.	ary " bgs.								
		The	stra	atifi	cation	lines represent the ap	proximate boundary lines between	n soil typ	es: ir	situ, th	e transit	tion m	ay be (gradual		
WL 14'	ws						BORING STARTED 11/12/09			OM OFF		Lans	ing			
WL							BORING COMPLETED 11/12/09			ERED B'	Ś		ET NO.	1 OF	1	
The stratification lines represent the approximate boundary lines be BORING STARTED 11/12/09 WL BORING COMPLETED 11/12/09 WL RIG/FOREMAN Fibertec - 6620						RIG/FOREMAN Fibertec - 6620DT/		APP'D BY AECOM JOB NO. 60103292								

AFCON	CLIEN	от	LOG OF BO		·	B-13	
AECOM	PROJ	ECT NAME 9 PSI	AECOM FIE	ELD REPRE	SENTATIVE		
SITE LOCATION Plainwell, N	11		(RQD)	PM)	-O-UNCONFT TONS/FT	FINED COMPRESSIVE S	STRENGTH 5
DEPTH(FT) ELEVATION(FT) SAMPLE NO. SAMPLE TYPE	SAMPLE DISTANCE RECOVERY % U.S.C.S. CODE	DESCRIPTION OF MATER	TA Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	PLASTIC LIMIT % X————————————————————————————————————	CONTENT % L 20 30 40 STANDARD	LIQUID LIMIT %
SAN SAN	REC U.S.	SURFACE ELEVATION	Roc	PHC	⊗ 10	PENETRATION BLOW 20 30 40	/S/FT. 50
1 GP	SP-S	3.5		0			
2 GP		Tan fine-coarse sand with gravel, 1	race silt.	0			
3 GP	SW	15.0		0			
The st WL 13' WS WL WL		EOB 15' bgs. Soil sample collected from 2-3' bgs Backfilled with cuttings and bentor					
The st	ratificatio	n lines represent the approximate boundary lines BORING STARTED		in situ, th	05		
13' WS		11/13/0 BORING COMPLETED 11/13/0	9	ENTERED BY	Lai	nsing HEET NO. OF	
WL		RIG/FOREMAN Fibertec - 66	А	APP'D BY		1 1 COM JOB NO. 60103292	

					CLIENT MDO			LOG O	F BOR	ING NU	MBER	S	B-14			
AE	C	ON	1	F	ROJE	CT NAME		AECON	/ FIELD) REPR	ESENT	ATIVE				
SITE LO	CATI	ON			M-89	PSI						NCONI	INED CO	MPRES	SIVE STE	RENGTH
Plai			MI						(RQD	PM)	Tý	ONS/FT	T. ²	3	SIVE STR	5
T) ON(FT)		ш	TANCE	%	Щ		ESCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	LIM	· STIC IT % ← — ·		ATER TENT %	LIG LIM	UID IIT %
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	COVERY	U.S.C.S. CODE				ck Quality	IOTO-IONI;	1	0	STAND	ARD	40 5	50 +
\times	SA	SA	SA H	RE	D.	SURFACE ELEVAT			8	표		0	20 —	30 4	40 5	7F1. 50
5.0	1	GP			SP-SM	Brown	silty fine-medium sand with grave	I.		0						
					SW	Tan fine	e-coarse sand with gravel.									
10.0	2	GP			SW	Brown	fine-medium sand, trace silt.			0						
15.0	3	GP			SW	11.5 Tan fine 14' bgs	e-coarse sand with gravel. Satura	ted @		0						
10.0						EOB 15	5' bgs. nple collected from 3-4' bgs.									
						Васктій	ed with cuttings and bentonite.									
		The s	stra	atifi	cation	lines represent the a	pproximate boundary lines betwe	en soil typ	oes: ir	situ, th	ne trans	sition	may be	gradua	l.	
	ws						BORING STARTED 11/13/09			COM OFF		Laı	nsing			
WL							BORING COMPLETED 11/13/09		_	ERED B	Š		IEET NO.	1	1	
WL							RIG/FOREMAN Fibertec - 6620DT/		APF	P'D BY		AE	COM JO	B NO. 60103 2	292	

, -	C	71			LIENT MDO	T		LOG OF	BOR	ING NU	MBER	S	B-15			
AE	U	J ľ	۷Į	F	PROJE	CT NAME PSI		AECOM	FIELD) REPRI						
SITE LOC Plair			MI						(RQD)	PM)	-()- UI TC 1	NCONF DNS/FT	INED CO	MPRESS	SIVE STF	RENGTH 5
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	PLE DISTANCE	RECOVERY %	c.s. code	DE	ESCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	1	Τ % ← — - 0	CON	+	_ LIN	QUID filt %
	SAM	SAM	SAM	REC	U.S.C.S.	SURFACE ELEVATION			Rock	PHO	1		PENET	RATION		/FT. 50
5.0	1	GP		——————————————————————————————————————	SW-SN	Dark bro gravel.	and vegetation. wn/red silty fine-medium sand w	<i>i</i> ith		0						
10.0	2	GP				6.5 Tan fine- 13.5' bgs	-coarse sand with gravel. Satura 3.	ted @		0						
15.0	3	GP			SW	15.0 EOB 15'				0						
						Groundw PVC mor	ple collected from 5-6' bgs. vater collected through 1" tempo nitoring well screened from 10-1 d with cuttings and bentonite.	rary 5' bgs.								
WL		The	stra	atifi	cation	lines represent the ap	proximate boundary lines betwe	en soil typ	_	situ, th				gradua	l.	
13.5 WL	5' W	<u>s</u>					11/13/09 BORING COMPLETED 11/13/09			ERED BY			EET NO.	1 OF	1	
WL							RIG/FOREMAN Fibertec - 6620DT/			D BY	-	AE	COM JOE			

I A E COA	CLIEN MD		LOG OF	BORING NU	MBER	SB-16	
AECOM	PROJ	ECT NAME	AECOM F	FIELD REPR			
SITE LOCATION Plainwell, N				(RQD)	-O-UNCO TONS/	NFINED COMPRES	SSIVE STRENGTH
DEPTH(FT) ELEVATION(FT) SAMPLE NO.	SAMPLE DISTANCE RECOVERY % U.S.C.S. CODE	DESCRIPTION OF	MATERIAL	Rock Quality Designation (RQD) PHOTO-IONIZATION DETECTOR READING (PPM)	PLASTIC LIMIT %	CONTENT %	40 50
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	S III O	SURFACE ELEVATION		§ HH	10	PENETRATION 20 30	40 50
1 GP	sw	Topsoil and vegetation. Brown/orange fine-coarse	sand, some silt.	0			
2 GP	SW			0			<u> </u>
3 GP	SW	Tan gravelly fine-coarse sa		0			
The s WL 12' WS WL		EOB 15' bgs. Soil sample collected from Backfilled with cuttings and	_				
The s	tratificatio	on lines represent the approximate bounda			105		al.
WL 12' WS		BORING STARTED BORING COMPLE	11/13/09	AECOM OFF		ansing SHEET NO. 0	DF 1
WL		RIG/FOREMAN	rtec - 6620DT/	APP'D BY		AECOM JOB NO. 60103	

11			_		CLIENT MDO		LOG OI	F BOR	ING NU	MBER	SB	-17			
	C)N	1	F		CT NAME	AECOM	/ FIELI) REPR	ESENTA					
SITE LO	CATI inw		MI					(RQD)	PM)	-O-UN TOI 1	CONFIN NS/FT. ² 2	ED COM	MPRESS	IVE STR	RENGTH 5
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY %	U.S.C.S. CODE	DESCRIPTION OF MATERIA	L.	Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	10	20	TANDA	ENT % — — - 0 4 RD	LIM — — 	QUID IIT % 🛆 50
\boxtimes	SAN	SAN	SAI	REC	U.S	SURFACE ELEVATION		Roc	PHC	⊗ 10				BLOWS/	/FT. 50
			Н			1.0 Topsoil and vegetation.	41 114								
5.0	1	GP			SW	Brown/orange fine-medium sand wi	tn siit.		0						
	2	GP			SW	Brown fine-coarse sand with gravel.									
10.0	-	Gi			SW	Tan fine-medium sand, trace silt. Sa 13' bgs.	aturated @		0						
	3	GP				ុំ÷ុំ•ុំ•ុំ •ុំ÷ុំ•ុំ•13.5			0						
15.0					SW	Dark brown silty fine-medium sand	with gravel.								
						EOB 15' bgs. Soil sample collected from 12-13' bg Groundwater collected through 1" te PVC monitoring well screened from Backfilled with cuttings and bentonit	emporary 10-15' bgs.								
<u> </u>		The	stra	atifi	cation	lines represent the approximate boundary lines b	etween soil typ	_					radual	——	
	'ws					BORING STARTED 11/13/09			COM OFF		Lansi				
WL						BORING COMPLETED 11/13/09		_	ERED BY	Š			1 OF	1	
WL						RIG/FOREMAN Fibertec - 662	0DT/	APF	D BY		AECO	OM JOB	NO. 501032	92	

, -		^ ^ •			LIENT MDC	T		LOG OF	BOR	ING NU	MBER	S	B-18			
	: U	Uľ	۷Į	F	PROJE	CT NAME PSI		AECOM	FIELD) REPRI						
SITE LO Pla i			MI						(RQD)	PM)	-O-UI TC	NCONF DNS/FT	INED CO	MPRESS	SIVE STF	RENGTH
DEPTH(FT) ELEVATION(FT)	E NO.	SAMPLE TYPE	E DISTANCE	RECOVERY %	. CODE	DE	SCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	PLAS LIMI >	⊤ % ← — -	CONT	ATER FENT %	_ LIM	QUID IIT %
	SAMPLE NO.	AMPL	AMPL	ECOV	U.S.C.S.	OUDEAGE ELEVATIO	AN I		ock Q	ното	(3	STAND/ PENETI	RATION	BLOWS	/FT.
	S	S	S	L T)	SURFACE ELEVATION Topsoil a	nd vegetation.		<u>~</u>	<u> </u>	1	0	20 (30 4	10 5	50
5.0	1	GP		9	SW-SN	Brown si	Ity fine-medium sand, trace grave	el.		0						
10.0	2	GP				Tan fine-	coarse sand with gravel, trace sid @ 11.5' bgs.	lt.		0						
15.0	3	GP			SW	15.0 15.0				0						
						Soil sam	bgs. ple collected from 4-5' bgs. d with cuttings and bentonite.									
		The	otro	atit:	cation	lines represent the en	provimate houndary lines between	an soil to	oc. in	citu th	ne trans	ition ~	nav bo	graduci		
WL		iile :	અ(દ	aull	CallOI1	mics represent the ap	BORING STARTED	ar son typ	_	OM OFF				yı auudl	-	
₩L 11.	.5' W	S					11/13/09						sing EET NO.	OF		
WL					Saturated @ 11.5' bg EOB 15' bgs. Soil sample collected Backfilled with cutting Boring ST/BORING CO	BORING COMPLETED 11/13/09 RIG/FOREMAN			ERED BY	S			1	1		
**L							Fibertec - 6620DT/		AFF	,,,		7.5	COIVI JUE	601032	292	

AECOM	MDC			1								
1	M-89	CT NAME PSI		AECOM	FIELD	REPR						
SITE LOCATION Plainwell, MI					(RQD)	PM)	-O-UN TO	ICONFI NS/FT.	NED COI	MPRESS	IVE STR	ENGTH
DEPTH(FT) ELEVATION(FT) SAMPLE NO. SAMPLE TYPE SAMPLE DISTANCE	RECOVERY % U.S.C.S. CODE	DE	SCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	PLAS LIMI X	Г% — —) 2	CONTI	RD.	LIM — — — — 0 5	<u>\$</u> 60 +
SAN SAN	U.S.	SURFACE ELEVATIO			Roc		10		PENETF 0 3			FT. 60
1 GP	_\$W-SN	Brown sil	nd vegetation. ty fine-medium sand, trace grave	al.		0	0					
2 GP		**************************************	coarse sand with gravel, trace sil	t.		0						
3 GP	Sw	Saturated	d @ 11.5' bgs.			0						
The strat WL 11.5' WS WL		Groundw PVC mor	bgs. pole collected from 4-5' bgs. pater collected through 1" temporal and some some some some some some some some	ary i' bgs.								
The strat	tification	lines represent the app	proximate boundary lines betwee	n soil type						gradual	•	
ML 11.5' WS			BORING STARTED 11/13/09 BORING COMPLETED			OM OFF		Lans	ET NO.	OF		
WL			BORING COMPLETED 11/13/09 RIG/FOREMAN Fibertec - 6620DT/		APP'	CJS D BY	3		OM JOB	1	1	

, ,		^ 1			CIENT MDC				LOG	OF BOR	ING NU	MBER	SI	B-2			
AE	:Cl	JI	7]			O PSI			AECO	M FIELD	REPR						
SITE LO			MI							(RQD)	(Mc	-O-T/	NCONFI DNS/FT. 1	NED COI	MPRESS	SIVE STE 4	RENGTH 5
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	NCE	RECOVERY %	U.S.C.S. CODE		DES	SCRIPTION OF MATERIA	L	 	PHOTO-IONIZATION DETECTOR READING (PPM)	1	IT % ← — – 0 :	CONT • • • • • • • • • • • • • • • • •	HRD	LIM 	QUID IIT %
\times	SAN	SAN	SAN	REC	U.S.	SURFACE		N		Roc	PHC			PENETF			/FT. 50
5.0	1	GP			SW		Topsoil. Brown silt	ty fine-medium sand with g	ravel.		0						
10.0	2	GP			§W-SI	9.5 10.0 10.0 10.0		d silty fine-medium sand, s			0						
15.0	3	GP		<u> </u>	SW		Brown silt	ty fine-medium sand with g	ravel.		0						
	4	GP		1	SP-SN	17.0	Dark brov	vn/black silty fine sand, tra	ce gravel.		0						
20.0			Н			19.0	Tan fine-r	medium sand, trace silt.									-
								soil sample rom 17-18' bg									
		The	stra	tific	cation	lines repres	ent the app	proximate boundary lines be	etween soil ty	/pes: ir	situ, th	ne trans	sition n	nay be g	gradual		
WL No	t enc	ount	tere	ed				BORING STARTED 11/12/09		AEC	OM OFF	ICE	Lan	sing			
WL								BORING COMPLETED 11/12/09			ERED B'	Š		EET NO.	1 OF	1	
WL								RIG/FOREMAN Fibertec - 662	DDT/	APF	D BY		AEC	COM JOB	NO. 601032	292	

, ,	· C (^ 1	4	l	LIENT MDC	T		LOG OF	BORI	NG NU	MBER	SI	B-3			
AE		JI	۷Į			CT NAME PSI		AECOM	FIELD	REPRI						
SITE LO			MI						(RQD)	PM)	-()- UI T(NCONFI DNS/FT.	NED COI	MPRESS	SIVE STR	.ENGTH 5
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY %	S. CODE	Di	ESCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	PLAS LIMI >	⊤% ← — –	CONT		_ LIM	PUID IT %
	SAME	SAME	SAMF	RECC	U.S.C.S.	SURFACE ELEVATION	ON		Rock	PHOT DETE	1		PENETF	RATION		FT. 50
	1	GP			SW	0.5 Topsoil. Brown fi 4.5-5.0'	ine-coarse sand with gravel. Rock bgs.	from		0						
5.0	2	GP				5.0 Tan fine	e-coarse sand with gravel, trace sill	t.		0						
15.0	3	GP			SW					0						
20.0	4	GP				20.0				0						
							bgs. d soil sample rom 10-11' bgs. d with cuttings and bentonite.									
		The	stra	atific	cation	lines represent the ap	oproximate boundary lines between	n soil type	es: in	situ, th	e trans	ition n	nay be (gradual	-	
WL No	t enc	ount	tere	ed			BORING STARTED 11/12/09		AEC	OM OFF	ICE	Lan	sing			
WL							BORING COMPLETED 11/12/09			ERED B'	Ý Š		EET NO.	1 OF	1	
WL							RIG/FOREMAN Fibertec - 6620DT/		APP	'D BY		AEC	COM JOB	NO. 601032	292	

, ,		^ \	. 4	l	CLIENT MDC	T		LOG OF	BOR	ING NU	MBER	SI	B-4			
AE		Uľ	۷Į			CT NAME PSI		AECOM	FIELD	REPR						
SITE LO Plai			MI						(RQD)	PM)	-O-UI	NCONFI DNS/FT. 1	NED CO	WPRESS	SIVE STR	ENGTH
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	APLE DISTANCE	RECOVERY %	U.S.C.S. CODE	DE	SCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	LIMI > 1	-	CONT • • 20 3 STANDA	+ ARD	LIMI — — — — 5	<u>\$</u> 50 +
\times	SAN	SAN	SAN	REC	U.S.	SURFACE ELEVATIO	N		Roc	PHC	1		PENETF 20 3	RATION 1 30 4	BLOWS/I I0 5	FT. 50
5.0	1	GP			SW		ne-medium sand with silt and gra	ivel.		0						
10.0	2	GP		1	SVV	10.0				0						
15.0	3	GP			SW	Tan fine-	coarse sand with gravel, trace si	lt.		0						
20.0	4	GP			SVV	20.0										
						EOB 20'	bgs.									
							soil sample rom 4-5' bgs.									
						Backfilled	d with cuttings and bentonite.									
	1	The	stra	atific	cation	lines represent the app	proximate boundary lines between	en soil typ	es: in	situ, th	ne trans	sition n	nay be (gradual		
	ot end	coun	ter	ed			BORING STARTED 11/12/09			OM OFF		Lan				
WL							BORING COMPLETED 11/12/09 RIG/FOREMAN			ERED BY	Š		EET NO.	1 3 NO.	1	
** L							Fibertec - 6620DT/		AFF	וטט		AEC	JOINI JUE	601032	92	

I A E CONA	CLIENT MDOT		LOG OF E	ORING NU	MBER	SB-5	
AECOM	PROJECT NAME M-89 PSI		AECOM F	IELD REPR			
SITE LOCATION Plainwell, MI				(RQD)	-O-UNCO	NFINED COMPRE /FT. ² 2 3	SSIVE STRENGTH
DEPTH(FT) ELEVATION(FT) SAMPLE NO. SAMPLE TYPE SAMPLE DISTANCE	SURFACE ELEV	DESCRIPTION OF MATERIAL		Kock Quality Designation (KQD) PHOTO-IONIZATION DETECTOR READING (PPM)	PLASTIC LIMIT % ————————————————————————————————————	CONTENT 9 20 30 STANDARD	40 50
				PHC DET	⊗ 10	PENETRATIO	N BLOWS/FT. 40 50
1 GP	SW-SMt. III grav€	brown silty fine-medium sand, trace		0			
2 GP	∐ ^{SVV} :::::: 8.0	brown fine-medium sand, trace silt.					
10.0	Brow	n fine-coarse sand with gravel.		0			
3 GP	SW			0			
4 GP -	;•;•;•;} Brow	n fine-medium sand, trace gravel and ated @ 19' bgs.	d silt.	0			
		20' bgs.					
	Soil s	ample collected from 18-19' bgs.					
		illed with cuttings and bentonite.					
	ification lines represent the	approximate boundary lines between			105		ıal.
19' WS WL		BORING STARTED 11/13/09 BORING COMPLETED 11/13/09		AECOM OFF ENTERED B' CJ:		SHEET NO.	OF .
WL		11/13/09 RIG/FOREMAN Fibertec - 6620DT/		CJS APP'D BY		1 AECOM JOB NO. 6010	1

, ,		~	4	1	MDO	T				LOG OF	BOR	ING NU	MBER	S	B-6			
AE		JI	γĮ			CT NAME PSI				AECOM	FIELD	REPRI						
SITE LO Pla i			MI								(RQD)	PM)	-O-UI	NCONF ONS/FT 1	INED CO	MPRES: 3	SIVE STI 4	RENGTH 5
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY %	U.S.C.S. CODE		DES	SCRIPTION OF I	MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	1	Π % ← — - 0 ⊢	CONT	-	_ LIN	QUID MIT %
\times	SAM	SAM	SAM	REC	U.S.(SURFACE		N			Rock	PHO	1		PENET	RATION	BLOWS 40	5/FT. 50
5.0	1	GP		s T	W-SN	10.5	Topsoil. Dark brov gravel.	vn silty fine-mediu	im sand, trace			0						
10.0	2	GP		_		7.0	Brown fin @ 17.5' b	le-coarse sand wil logs.	h gravel. Satura	ated		0						
15.0	3	GP			SW							0						
20.0	4	GP	-			20.0						0						
							Groundwa PVC mon	bgs. ble collected from ater collected thro ater collected thro ater it or at the collected through the collected through and the collected through the c	ugh 1" tempora ned from 15-20	ary ' bgs.								
		The	strat	ific	ation	lines represe	ent the app	oroximate boundar	ry lines betweer	n soil type	es: in	situ, th	ne trans	sition r	nay be	gradua	l.	
	.5' W	S							11/13/09			OM OFF			sing			
WL WL								BORING COMPLET			_	ERED BY	Š		EET NO.	1 OF 3 NO.	1	
								Fiber	tec - 6620DT/							60103	292	

_A F	: <i>C4</i>	^ }			MDC	T		LOG O					B-7			
AE	U	Uľ	۷į			CT NAME PSI		AECON	1 FIELD	REPR						
SITE LO			MI						(RQD)	PM)	-O-T	NCONF ONS/FT.	INED CO	MPRESS	IVE STR	RENGTH 5
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	MPLE DISTANCE	RECOVERY %	U.S.C.S. CODE	DE	ESCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	LIMI > 1	-	CONT (20 : STAND	ARD	LIMI — — — — 10 5	50
\times	SAI	SAI	SAI	RE	U.S	SURFACE ELEVATION			Roc	P.H.	1	⊗ 0		RATION I		FT. 50
5.0	1	GP			SW-SI	Brown si	vith vegetation. ilty fine-medium sand, trace grav	el.		0						
5.0			Ħ	Ħ;	SP-S0	6.0 Dark bro	wn fine clayey sand with gravel.									
10.0	2	GP			SW		ne-medium sand with gravel.			0						
	3	GP		L		14.0				0						
15.0			H	Т		Tan grav 16.5' bgs	velly fine-coarse sand. Saturated s.	@								
20.0	4	GP			SW	**************************************				0						
			ľ			EOB 15'	bgs.									
						Soil sam	ple collected from 16-16.5' bgs.									
						Backfille	d with cuttings and bentonite.									
		The	stra	atifi	cation	lines represent the ap	proximate boundary lines betwee	en soil typ	oes: ir	ı situ, th	ne transa	sition r	nay be e	gradual		
WL 40			SIT	aun	calion	ines represent the ap	BORING STARTED	en son typ	_	COM OFF			sing	<u>adual</u>	·	
16. WL	.5' W	3					11/13/09 BORING COMPLETED 11/13/09		ENT	TERED B	Y S		EET NO.	1 OF	1	
WL							RIG/FOREMAN Fibertec - 6620DT/			P'D BY	-	AE	COM JOE			

, -		^ }			MDC	T		LOG OI	F BOR	ING NU	MBER	S	B-8			
^{At}	AECOM PROJECT NAME M-89 PSI SITE LOCATION Plainwell, MI							AECOM	1 FIELD) REPR						
			МІ						(RQD)	PM)	-O-UI	NCONF ONS/FT 1	INED CO	MPRESS	IVE STR	RENGTH 5
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	PLE DISTANCE	RECOVERY %	S. CODE	DE	SCRIPTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	LIMI >	STIC IT % ← — -	CONT		_ LIM	QUID IIT % A
	SAME	SAME	SAME	RECC	U.S.C.S.	SURFACE ELEVATIO	N		Rock	PHOT	1		PENET	RATION		/FT. 50
			Ħ	Ħ			vith vegetation.									
5.0	1	GP		5	SW-SN	5.0	ne-medium silty sand w/ gravel.			0						
10.0	2	GP			SP-SC	10.0	ne-coarse sand with gravel, trace			0						
15.0	3	GP		ا پل	SW-SN	14.5' bgs	elly fine-coarse sand. Saturated	@		0						
13.0			T			EOB 15'	bgs.									
							ole collected from 4-5' bgs.									
							d with cuttings and bentonite.									
		The	stra	atifi	cation	lines represent the app	proximate boundary lines between	en soil typ	es: ir	situ, th	ne trans	sition r	nay be	gradual	-	
WL 14 .	.5' W	S					BORING STARTED 11/12/09		AEC	COM OFF	ICE	Lan	sing			
WL							BORING COMPLETED 11/12/09		ENT	TERED BY	Š_	SH	EET NO.	1 OF	1	
The stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines between the stratification lines represent the approximate boundary lines lines represent the approximate boundary lines lines lines represent the approximate boundary lines lines represent the approximate lines represent the approximate lines lines lines represent the approximate lines						APF	D BY		AE	COM JOE	3 NO. 601032	92				

		_		- 1	CLIENT MDO				LOG O	F BOR	ING NU	MBER	S	B-9			
AE	EC	ON	1	F	ROJE	CT NAME			AECON	/ FIELD	REPR	ESENTA	TIVE				
SITE LO Plai			N/II		M-89	PSI					ŝ	-O-UN	CONF	FINED CC	MPRES	SIVE STR	RENGTH
(FT)	liiw				ш		5.5	CODIDTION OF MATERIAL		Rock Quality Designation (RQD)	PHOTO-IONIZATION DETECTOR READING (PPM)	PLAS	TIC	W	ATER TENT %	LIG LIM	5 † QUID IIT %
DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	MPLE DIST	RECOVERY %	U.S.C.S. CODE			SCRIPTION OF MATERIAL		ck Quality 🗅	OTO-IONIZ	10)	STAND	ARD		50
\times	SA	SA	SA	R	O.:		ELEVATIO	N		8	PH	10					50
	1	GP			SW-SN	0.4	Asphalt. Brown fir	ne-medium silty sand w/ gravel.			0						
5.0			Ц	. 5	SW-SN	5.5	Brown fir	ne-medium sand with silt, trace	gravel.							1	
			Ħ	9	SW-SN	7.0	Brown fir	ne-medium silty sand w/ gravel.									
10.0	2	GP					Tan fine- 14' bgs.	coarse sand with gravel. Satura	ated @		0						
15.0	3	GP			SW						0						
20.0	4	GP				20.0					0						
							EOB 20'	bgs.									
							Soil sam	ole collected from 5-5.5' bgs.									
							Groundw	rater sample collected through 1 y PVC monitoring well screened	1" d from								
							Backfilled	d with cuttings and bentonite.									
													_				
		The	stra	atifi	cation	lines repres	sent the ap	proximate boundary lines betwe	en soil typ	es: ir	situ, th	ne transi	tion	may be	gradua	d	
WL 14 '	'ws							BORING STARTED 11/12/09		AEC	OM OFF	ICE	Lar	nsing			
WL								BORING COMPLETED 11/12/09		ENT	ERED B	Y S	SH	IEET NO.	1 OF	F 1	
WL RIG/FOREMAN					ı		D BY		AE	СОМ ЈО	B NO. 60103	292					
			_	_													



Wednesday, November 18, 2009

Fibertec Project Number: 36754

Project Identification: MDOT/ Plainwell/60103292

Submittal Date: 11/10/2009

Mr. Craig Simon AECOM - Lansing 401 S. Washington Square Suite 103 Lansing, MI 48933

Dear Mr. Simon,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345. Please note samples will be disposed of 30 days after reporting date.

Sincerely,

Shamllen

Daryl P. Strandbergh Laboratory Director

DPS/kc

Enclosures



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36754-001 36754 Fibertec Project Number:

Client Sample Information

MDOT/ Plainwell SS-1 Project Identification: Client Sample Description:

60103292 Client Sample Number: 1 Project Number:

Sample Date: 75953 11/9/2009 Chain of Custody Number:

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 29.1%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)		-11	1	l. I		1	1
Percent Moisture (Water Content)	29	%	0.1	1	MC091113	11/16/2009	11/17/2009	BMG
Michigan 10 Elements by ICP/MS (EP	A 3050B/EPA 6	020)						
Arsenic	1500	μg/kg	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Barium	25000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Cadmium	77	μg/kg	50	1	PT09K17A	11/17/2009	11/17/2009	JLH
Chromium	8300	μg/kg	500	1	PT09K17A	11/17/2009	11/17/2009	JLH
Copper	3800	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Lead	14000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Selenium	U	μg/kg	200	1	PT09K17A	11/17/2009	11/17/2009	JLH
Silver	U	μg/kg	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Zinc	28000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Mercury by CVAAS (EPA 7471A)								
Mercury	73	μg/kg	71	1	PM09K17A	11/17/2009	11/17/2009	MAP
Polychlorinated Biphenyls (PCBs) (EP	A 3550B/EPA 80	082)						
Aroclor-1016	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1221	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1232	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1242	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1248	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1254	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1260	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA

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T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Client Identification: **AECOM - Lansing** Sample Matrix: Other (Solid)

Sample Number: 36754-001 36754 Fibertec Project Number:

Client Sample Information

MDOT/ Plainwell SS-1 Project Identification: Client Sample Description:

60103292 Client Sample Number: Project Number: 1

75953 Sample Date: 11/9/2009 Chain of Custody Number:

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 29.1%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polychlorinated Biphenyls (PCBs) (EP	A 3550B/EPA 8	082)						
Aroclor-1262	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1268	U	μg/kg	330	1	PS09K16B	11/16/2009	11/16/2009	BDA
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 35	50B/EPA 8270	C)					
Acenaphthene	U	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Acenaphthylene	\mathbf{U}	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Anthracene	U	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(a)anthracene	860	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(a)pyrene	940	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(b)fluoranthene	1300	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(ghi)perylene	640	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Chrysene	860	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Fluoranthene	2400	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Fluorene	\mathbf{U}	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Indeno(1,2,3-cd)pyrene	530	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
2-Methylnaphthalene	\mathbf{U}	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Naphthalene	\mathbf{U}	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Phenanthrene	1500	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA
Pyrene	1800	μg/kg	470	1	PS09K16B	11/16/2009	11/17/2009	BDA

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36754-002 36754 Fibertec Project Number:

Client Sample Information

MDOT/ Plainwell SS-2 Project Identification: Client Sample Description:

60103292 Client Sample Number: 2 Project Number:

75953 Sample Date: 11/9/2009 Chain of Custody Number:

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 18.7%.

A: Spike recovery or precision unusable due to dilution. Definitions/ Qualifiers:

B: The analyte was detected in the associated method blank. U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated. *: Value reported is outside QA limits

J: The concentration is an estimated value.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Michigan 10 Elements by ICP/MS (EF	PA 3050B/EPA 6	020)		1	1			II.
Arsenic	1900	$\mu g/kg$	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Barium	17000	$\mu g/kg$	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Cadmium	92	μg/kg	50	1	PT09K17A	11/17/2009	11/17/2009	JLH
Chromium	8500	μg/kg	500	1	PT09K17A	11/17/2009	11/17/2009	JLH
Copper	4400	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Lead	16000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Selenium	\mathbf{U}	μg/kg	200	1	PT09K17A	11/17/2009	11/17/2009	JLH
Silver	\mathbf{U}	μg/kg	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Zinc	29000	$\mu g/kg$	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Mercury by CVAAS (EPA 7471A)								
Mercury	U	$\mu g/kg$	62	1	PM09K17A	11/17/2009	11/17/2009	MAP
Polychlorinated Biphenyls (PCBs) (EP	PA 3550B/EPA 8	082)						
Aroclor-1016	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1221	U	$\mu g/kg$	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1232	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1242	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1248	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1254	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1260	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1262	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36754-002 36754 Fibertec Project Number:

Client Sample Information

MDOT/ Plainwell SS-2 Project Identification: Client Sample Description:

60103292 Client Sample Number: Project Number:

11/9/2009 75953 Sample Date: Chain of Custody Number:

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 18.7%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Factor Units Prep Date/Time Analyte Result Report Limit **Analysis Date/Time** Analyst Batch Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)

J: The concentration is an estimated value.

Aroclor-1268	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550	B/EPA 8270C)						
Acenaphthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Acenaphthylene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Anthracene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(a)anthracene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(a)pyrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(ghi)perylene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Chrysene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Fluoranthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Fluorene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
2-Methylnaphthalene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Naphthalene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Phenanthrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA
Pyrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	BDA

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T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36754-003 36754 Fibertec Project Number:

Client Sample Information

MDOT/ Plainwell SS-3 Project Identification: Client Sample Description:

60103292 Client Sample Number: 3 Project Number:

Sample Date: 11/9/2009 75953 Chain of Custody Number:

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 24.9%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)	l -						
Percent Moisture (Water Content)	25	%	0.1	1	MC091113	11/16/2009	11/17/2009	BMG
Michigan 10 Elements by ICP/MS (EF	PA 3050B/EPA 60	020)						
Arsenic	2100	μg/kg	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Barium	26000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Cadmium	79	μg/kg	50	1	PT09K17A	11/17/2009	11/17/2009	JLH
Chromium	9000	μg/kg	500	1	PT09K17A	11/17/2009	11/17/2009	JLH
Copper	21000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Lead	11000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Selenium	U	μg/kg	200	1	PT09K17A	11/17/2009	11/17/2009	JLH
Silver	U	μg/kg	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Zinc	29000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Mercury by CVAAS (EPA 7471A)								
Mercury	U	μg/kg	67	1	PM09K17A	11/17/2009	11/17/2009	MAP
Polychlorinated Biphenyls (PCBs) (EP	A 3550B/EPA 80	082)						
Aroclor-1016	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1221	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1232	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1242	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1248	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1254	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1260	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
1014 Hallow	ou Drivo	Ualt MI 100	42	T: /517) 4	200 0245	E: /517	1 600 0299	

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36754 Sample Number: 36754-003

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SS-3

Project Number: 60103292 Client Sample Number: 3

Sample Date: 11/9/2009 Chain of Custody Number: 75953

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 24.9%.

Definitions/ A: Spike recovery or precis Qualifiers: B: The analyte was detected

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polychlorinated Biphenyls (PCBs) (EP	A 3550B/EPA 80	082)		1			,	
Aroclor-1262	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1268	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 355	50B/EPA 8270C						
Acenaphthene	U	μg/kg	440	1	PS09K16B	11/16/2009	NA	BDA
							Error	
Acenaphthylene	U	μg/kg	440	1	PS09K16B	11/16/2009	NA	BDA
							Error	
Anthracene	670	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Benzo(a)anthracene	1300	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Benzo(a)pyrene	780	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Benzo(b)fluoranthene	960	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Benzo(ghi)perylene	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Benzo(k)fluoranthene	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Chrysene	890	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Dibenzo(a,h)anthracene	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Fluoranthene	2400	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Fluorene	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Indeno(1,2,3-cd)pyrene	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
2-Methylnaphthalene	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Naphthalene	U	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA
Phenanthrene	1200	μg/kg	440	1	PS09K16B	11/16/2009	11/16/2009	BDA

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Client Identification: AECOM - Lansing Sample

Sample Matrix: Soil/Solid

Fibertec Project Number: 36754 Sample Number: 36754-003

Client Sample Information

Project Identification: MDOT/ Plainwell

Client Sample Description: SS-3

Project Number: 60103292 Client Sample Number: 3

Sample Date: 11/9/2009 Chain of Custody Number: 75953

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 24.9%.

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

distorted resul

W: Results reported on a wet-weight basis.
*: Value reported is outside QA limits

Analyte Result	Units Report Limi	Dilution Factor Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst	
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Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550B/EPA 8270C)

Pyrene **1700** µg/kg 440 1 PS09K16B 11/16/2009 11/16/2009 BDA



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36754-004 36754 Fibertec Project Number:

Client Sample Information

MDOT/ Plainwell SS-4 Project Identification: Client Sample Description:

60103292 Client Sample Number: Project Number:

Sample Date: 11/9/2009 75953 Chain of Custody Number:

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 19.5%.

A: Spike recovery or precision unusable due to dilution. Definitions/ Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D 2	2974-87)				l.			
Percent Moisture (Water Content)	19	%	0.1	1	MC091113	11/16/2009	11/17/2009	BMG
Michigan 10 Elements by ICP/MS (EP	A 3050B/EPA 60	020)						
Arsenic	2500	μg/kg	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Barium	32000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Cadmium	170	μg/kg	50	1	PT09K17A	11/17/2009	11/17/2009	JLH
Chromium	9100	μg/kg	500	1	PT09K17A	11/17/2009	11/17/2009	JLH
Copper	7200	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Lead	31000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Selenium	U	μg/kg	200	1	PT09K17A	11/17/2009	11/17/2009	JLH
Silver	U	μg/kg	100	1	PT09K17A	11/17/2009	11/17/2009	JLH
Zinc	33000	μg/kg	1000	1	PT09K17A	11/17/2009	11/17/2009	JLH
Mercury by CVAAS (EPA 7471A)								
Mercury	U	μg/kg	62	1	PM09K14B	11/14/2009	11/14/2009	MAP
Polychlorinated Biphenyls (PCBs) (EP	A 3550B/EPA 80	082)						
Aroclor-1016	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1221	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1232	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1242	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1248	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1254	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1260	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36754-004 36754 Fibertec Project Number:

Client Sample Information

MDOT/ Plainwell SS-4 Project Identification: Client Sample Description:

60103292 Client Sample Number: Project Number:

75953 Sample Date: 11/9/2009 Chain of Custody Number:

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 19.5%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polychlorinated Biphenyls (PCBs) (EP	A 3550B/EPA 8	082)					I .	
Aroclor-1262	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Aroclor-1268	U	μg/kg	410	1	PS09K16B	11/16/2009	11/16/2009	BDA
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 35	50B/EPA 8270	C)					
Acenaphthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Acenaphthylene	U	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Anthracene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Benzo(a)anthracene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Benzo(a)pyrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Benzo(ghi)perylene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Chrysene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Fluoranthene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Fluorene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
2-Methylnaphthalene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Naphthalene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Phenanthrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC
Pyrene	\mathbf{U}	μg/kg	410	1	PS09K16B	11/16/2009	11/17/2009	TMC

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Hoff, MI 48842 1914 Holloway Drive Analytical Laboratory

Cadillac, MI 49601 8660 S. Mackinaw Trail Phone: 231 775 8368 Fax: 231 775 8584

Phone: 517 699 0345 Holt, MI 48842 1914 Holloway Drive Industrial Hygiene Services, Inc. Fax: 517 699 0382

> Brighton, MI 48116 Geoprobe 11766 E. Grand River

Chain of Custody # 75953

	o	mail: lab	email: lab@fibertec.us			emo	ill: asb	emall: asbestos@fibertec.us		
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TERMS & CONDITIONS ON BACK



Wednesday, November 25, 2009

Fibertec Project Number: 36840

Project Identification: MDOT/ Plainwell/60103292

Submittal Date: 11/16/2009

Mr. Craig Simon AECOM - Lansing 401 S. Washington Square Suite 103 Lansing, MI 48933

Dear Mr. Simon,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345. Please note samples will be disposed of 30 days after reporting date.

Sincerely,

Many Shamlle-

Daryl P. Strandbergh Laboratory Director

DPS/kc

Enclosures



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-001

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-1 12-12.5'

Project Number: 60103292 Client Sample Number: 1

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 12.0%.

Definitions/ A: Spike recovery or precision unusable due to dilution.

Qualifiers: B: The analyte was detected in the associated method blar

B: The analyte was detected in the associated method blank. U: The analyte was not detected at or above the reporting limit.

J: The concentration is an estimated value.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

11/12/2009

11/12/2009

W: Results reported on a wet-weight basis.
*: Value reported is outside QA limits

11/18/2009

11/18/2009

JAS

JAS

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

U

U

μg/kg

μg/kg

Prep Dilution Prep Date/Time Units Analyte Result Report Limit Analysis Date/Time Analyst **Batch Factor** UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 8260B) Benzene VA09K18A μg/kg 50 11/12/2009 11/18/2009 JAS Ethylbenzene U 50 VA09K18A JAS 11/12/2009 11/18/2009 μg/kg MTBE 250 VA09K18A 11/12/2009 11/18/2009 JAS μg/kg Naphthalene VA09K18A U $\mu g \! / \! k g$ 330 11/12/2009 11/18/2009 JAS VA09K18A Toluene 50 11/12/2009 11/18/2009 JAS μg/kg U 1,2,3-Trimethylbenzene VA09K18A 11/12/2009 11/18/2009 $\mu g/kg$ 100 JAS 1,2,4-Trimethylbenzene 100 VA09K18A 11/12/2009 11/18/2009 JAS μg/kg

100

150

VA09K18A

VA09K18A

1,3,5-Trimethylbenzene

Xylenes



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-001A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-1 12-12.5'

60103292 Client Sample Number: 1 Project Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 12.0%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated

J: The concentration is an estimated value. U: The analyte was not detected at or above the reporting limit X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Result Report Limit Analysis Date/Time Analyte Analyst **Batch Factor** Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 0.1 11/18/2009 11/19/2009 BMG Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3545/EPA 8270C) Acenaphthene μg/kg 330 PS09K19C 11/19/2009 11/20/2009 HLS PS09K19C Acenaphthylene 330 1 11/19/2009 11/20/2009 HLS U μg/kg PS09K19C Anthracene U 330 11/19/2009 11/20/2009 HLS $\mu g/kg$ Benzo(a)anthracene U $\mu g \! / \! k g$ 330 1 PS09K19C 11/19/2009 11/20/2009 HLS PS09K19C Benzo(a)pyrene U μg/kg 330 11/19/2009 11/20/2009 HLS Benzo(b)fluoranthene PS09K19C 370 330 11/19/2009 11/20/2009 HLS μg/kg Benzo(ghi)perylene 330 PS09K19C 11/19/2009 11/20/2009 HLS $\mu g/kg$ Benzo(k)fluoranthene PS09K19C TI μg/kg 330 1 11/19/2009 11/20/2009 HLS. PS09K19C HLS Chrysene U 330 11/19/2009 11/20/2009 μg/kg Dibenzo(a,h)anthracene U 330 PS09K19C 11/19/2009 11/20/2009 HLS μg/kg PS09K19C Fluoranthene 870 $\mu g/kg$ 330 11/19/2009 11/20/2009 HLS PS09K19C Fluorene 330 11/19/2009 11/20/2009 HLS U μg/kg Indeno(1,2,3-cd)pyrene PS09K19C μg/kg 330 11/19/2009 11/20/2009 HLS 2-Methylnaphthalene PS09K19C 11/19/2009 HLS U μg/kg 330 11/20/2009 Phenanthrene H 330 PS09K19C 11/19/2009 11/20/2009 HLS μg/kg Pyrene 970 330 PS09K19C 11/19/2009 11/20/2009 HLS μg/kg

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-002 Fibertec Project Number: 36840

Client Sample Information

MDOT/ Plainwell Project Identification: Client Sample Description: SB-2 17-18'

60103292 Client Sample Number: Project Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 13.1%.

μg/kg

U

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

11/18/2009

JAS

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Analyte Result Report Limit Analysis Date/Time Analyst **Batch Factor** UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 8260B) Benzene VA09K18A μg/kg 50 11/12/2009 11/18/2009 JAS Ethylbenzene U 50 VA09K18A JAS 11/12/2009 11/18/2009 μg/kg MTBE 250 VA09K18A 11/12/2009 11/18/2009 JAS μg/kg Naphthalene VA09K18A U $\mu g \! / \! k g$ 330 11/12/2009 11/18/2009 JAS

J: The concentration is an estimated value.

1,2,3-Trimethylbenzene VA09K18A 11/12/2009 11/18/2009 $\mu g/kg$ 100 JAS 1,2,4-Trimethylbenzene 100 VA09K18A 11/12/2009 11/18/2009 JAS μg/kg 1,3,5-Trimethylbenzene U 100 VA09K18A 11/12/2009 11/18/2009 JAS μg/kg Xylenes U 150 VA09K18A 11/12/2009 11/18/2009 JAS μg/kg

50

VA09K18A

11/12/2009

Toluene



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-002A 36840 Fibertec Project Number:

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-2 17-18'

60103292 Client Sample Number: 2 Project Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 13.1%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

U

3400

6900

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated

J: The concentration is an estimated value

U: The analyte was not detected at or above the reporting limit

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Result Report Limit Analysis Date/Time Analyte Analyst **Batch Factor** Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 0.1 11/18/2009 11/19/2009 BMG Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3545/EPA 8270C) Acenaphthene μg/kg 330 PS09K19C 11/19/2009 11/20/2009 TMC PS09K19C Acenaphthylene 400 330 1 11/19/2009 11/20/2009 TMC μg/kg PS09K19C Anthracene 700 330 11/19/2009 11/20/2009 TMC μg/kg Benzo(a)anthracene 4200 μg/kg 330 1 PS09K19C 11/19/2009 11/20/2009 TMC PS09K19C Benzo(a)pyrene 4000 μg/kg 330 11/19/2009 11/20/2009 TMC Benzo(b)fluoranthene PS09K19C 5600 330 11/19/2009 11/20/2009 TMC μg/kg Benzo(ghi)perylene 1700 330 PS09K19C 11/19/2009 11/20/2009 TMC $\mu g/kg$ Benzo(k)fluoranthene PS09K19C 2100 μg/kg 330 1 11/19/2009 11/20/2009 TMC 3800 PS09K19C TMC Chrysene 330 11/19/2009 11/20/2009 μg/kg Dibenzo(a,h)anthracene 330 PS09K19C 11/19/2009 11/20/2009 TMC 770 μg/kg PS09K19C Fluoranthene 8400 $\mu g/kg$ 330 11/19/2009 11/20/2009 TMC PS09K19C Fluorene 330 11/19/2009 11/20/2009 TMC U μg/kg Indeno(1,2,3-cd)pyrene 1900 PS09K19C TMC μg/kg 330 11/19/2009 11/20/2009

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μg/kg

μg/kg

μg/kg

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PS09K19C

PS09K19C

PS09K19C

F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

TMC

TMC

TMC

11/20/2009

11/20/2009

11/20/2009

11/19/2009

11/19/2009

11/19/2009

330

330

330

2-Methylnaphthalene

Phenanthrene

Pyrene



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-003 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-3 4-5'

Project Number: 60103292 Client Sample Number: 3

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.12%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

J: The concentration is an estimated value. B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

calibration range, therefore the result is estimated. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (I	EPA 5035/EPA 8	260B)						
Benzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
MTBE	U	μg/kg	250	1	VA09K18A	11/12/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/12/2009	11/18/2009	JAS
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/12/2009	11/18/2009	JAS



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-003A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-3 4-5'

Project Number: 60103292 Client Sample Number: 3

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.12%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

						<u> </u>		
Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	8.1	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Lead + Cadmium + Chromium by ICE	P/MS (EPA 3050)	B/EPA 6020)						
Cadmium	120	μg/kg	50	1	PT09K20A	11/20/2009	11/20/2009	JLH
Chromium	10000	μg/kg	500	1	PT09K20A	11/20/2009	11/20/2009	JLH
Lead	24000	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 354	45/EPA 8270C)						
Acenaphthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Acenaphthylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(b)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(ghi)perylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(k)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Chrysene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Dibenzo(a,h)anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluorene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Indeno(1,2,3-cd)pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
2-Methylnaphthalene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-003A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-3 4-5'

60103292 Client Sample Number: 3 Project Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.12%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbons ((PNAs) (EPA 354	15/EPA 8270C)						
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Pyrene	II	110/kg	330	1	PS09K19C	11/19/2009	11/20/2009	и с



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-004 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-4 10-11'

Project Number: 60103292 Client Sample Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.62%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 82	260B)						
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
Ethylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/12/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/12/2009	11/18/2009	JAS
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/12/2009	11/18/2009	JAS



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-004A 36840 Fibertec Project Number:

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-4 10-11'

60103292 Client Sample Number: Project Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.62%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated

J: The concentration is an estimated value B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Result Report Limit Analysis Date/Time Analyte Analyst **Batch Factor** Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 0.1 11/18/2009 11/19/2009 BMG Lead + Cadmium + Chromium by ICP/MS (EPA 3050B/EPA 6020) Cadmium μg/kg 50 PT09K20A 11/20/2009 11/20/2009 JLH PT09K20A Chromium 500 11/20/2009 11/20/2009 JLH 11000 μg/kg 1 27000 1000 PT09K20A 11/20/2009 11/20/2009 JLH $\mu g/kg$ Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3545/EPA 8270C) Acenaphthene PS09K19C HLS U μg/kg 330 11/19/2009 11/20/2009 Acenaphthylene U $\mu g/kg$ 330 PS09K19C 11/19/2009 11/20/2009 HLS Anthracene U μg/kg 330 PS09K19C 11/19/2009 11/20/2009 HLS PS09K19C Benzo(a)anthracene U 11/19/2009 11/20/2009 HLS μg/kg 330 Benzo(a)pyrene U μg/kg 330 PS09K19C 11/19/2009 11/20/2009 HLS Benzo(b)fluoranthene U 330 PS09K19C 11/19/2009 11/20/2009 HLS μg/kg PS09K19C Benzo(ghi)perylene TI 330 1 11/19/2009 11/20/2009 HLS μg/kg Benzo(k)fluoranthene PS09K19C U μg/kg 330 11/19/2009 11/20/2009 HLS Chrysene U μg/kg 330 PS09K19C 11/19/2009 11/20/2009 HLS PS09K19C Dibenzo(a,h)anthracene 11/19/2009 11/20/2009 U μg/kg 330 HLS PS09K19C Fluoranthene μg/kg 330 11/19/2009 11/20/2009 HLS

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 $\mu g/kg$

μg/kg

μg/kg

U

U

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PS09K19C

PS09K19C

PS09K19C

F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

11/20/2009

11/20/2009

11/20/2009

HLS

HLS

HLS

11/19/2009

11/19/2009

11/19/2009

330

330

330

Fluorene

Indeno(1,2,3-cd)pyrene

2-Methylnaphthalene



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-004A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-4 10-11'

Project Number: 60103292 Client Sample Number: 4

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.62%.

Definitions/ A: Spike recover Qualifiers: B: The analyte

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 354	45/EPA 8270C)						
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-005

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-12 3-4'

Project Number: 60103292 Client Sample Number: 5

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 14.7%.

Definitions/ A: Spike recovery or precision unusable due to dilution.

Qualifiers: B: The analyte was detected in the associated method blan

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank. U: The analyte was not detected at or above the E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (I	EPA 5035/EPA 8	260B)						
Benzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/12/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/12/2009	11/18/2009	JAS
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
Xylenes	U	μg/kg	150	1	VA09K18A	11/12/2009	11/18/2009	JAS



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-005A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-12 3-4'

Project Number: 60103292 Client Sample Number: 5

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 14.7%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	15	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Polynuclear Aromatic Hydrocarbons ((PNAs) (EPA 35	50B/EPA 82700	C)					
Acenaphthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Acenaphthylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Benzo(a)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Chrysene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Fluorene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
2-Methylnaphthalene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS
Pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/23/2009	HLS

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-006

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-12

Project Number: 60103292 Client Sample Number: 6

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments:

Definitions/ A Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
VOCs - UST - Unleaded Gasoline (EP.	A 5030B/EPA 82	260B)						
Benzene	U	μg/L	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS
Ethylbenzene	\mathbf{U}	$\mu g\!/L$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS
MTBE	\mathbf{U}	$\mu g/L$	5.0	1	V909K20B	11/20/2009	11/20/2009	JAS
Naphthalene	\mathbf{U}	$\mu g/L$	5.0	1	V909K20B	11/20/2009	11/20/2009	JAS
Toluene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	$\mu g/L$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS
Xylenes	\mathbf{U}	$\mu \text{g/L}$	3.0	1	V909K20B	11/20/2009	11/20/2009	JAS



Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-006A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-12

Project Number: 60103292 Client Sample Number: 6

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

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Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbo	ns (PNAs) (EPA 35.	35/EPA 8270C))					
Acenaphthene	\mathbf{U}	μ g/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Acenaphthylene	\mathbf{U}	μ g/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Anthracene	${f U}$	μ g/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)anthracene	\mathbf{U}	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)pyrene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(b)fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(ghi)perylene	U	$\mu g\!/L$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(k)fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Chrysene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Dibenzo(a,h)anthracene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluorene	U	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Indeno(1,2,3-cd)pyrene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
2-Methylnaphthalene	U	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Phenanthrene	U	$\mu g \! / L$	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Pyrene	U	$\mu \text{g/L}$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
1 yiene	U	μg/L	3.0	1	1 309K19A	11/19/2009	11/19/2009	БDА



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-007 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-11 2-3'

Project Number: 60103292 Client Sample Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.07%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated.

J: The concentration is an estimated value. B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (l	EPA 5035/EPA 8	260B)						
Benzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
Ethylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/12/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/12/2009	11/18/2009	JAS
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/12/2009	11/18/2009	JAS



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-007A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-11 2-3'

60103292 Client Sample Number: 7 Project Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.07%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated

J: The concentration is an estimated value. B: The analyte was detected in the associated method blank. U: The analyte was not detected at or above the reporting limit E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Result Report Limit Analysis Date/Time Analyte Analyst **Batch Factor** Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 0.1 11/18/2009 11/19/2009 BMG Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3545/EPA 8270C) Acenaphthene μg/kg 330 PS09K19C 11/19/2009 11/20/2009 HLS PS09K19C Acenaphthylene U 330 11/19/2009 11/20/2009 HLS μg/kg 1 Anthracene U 330 PS09K19C 11/19/2009 11/20/2009 HLS $\mu g/kg$ Benzo(a)anthracene U $\mu g \! / \! k g$ 330 PS09K19C 11/19/2009 11/20/2009 HLS PS09K19C Benzo(a)pyrene U μg/kg 330 11/19/2009 11/20/2009 HLS Benzo(b)fluoranthene PS09K19C 330 11/19/2009 11/20/2009 HLS U μg/kg Benzo(ghi)perylene 330 PS09K19C 11/19/2009 11/20/2009 HLS $\mu g/kg$ Benzo(k)fluoranthene PS09K19C TI μg/kg 330 1 11/19/2009 11/20/2009 HLS. PS09K19C HLS Chrysene U 330 11/19/2009 11/20/2009 μg/kg Dibenzo(a,h)anthracene 330 PS09K19C 11/19/2009 11/20/2009 HLS U μg/kg PS09K19C Fluoranthene U $\mu g/kg$ 330 11/19/2009 11/20/2009 HLS PS09K19C Fluorene 330 11/19/2009 11/20/2009 HLS U μg/kg Indeno(1,2,3-cd)pyrene PS09K19C μg/kg 330 11/19/2009 11/20/2009 HLS 2-Methylnaphthalene PS09K19C U 11/19/2009 HLS μg/kg 330 11/20/2009

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380

U

Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

μg/kg

μg/kg

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PS09K19C

PS09K19C

F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

11/20/2009

11/20/2009

HLS

HLS

11/19/2009

11/19/2009

330

330

Phenanthrene

Pyrene



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-008 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-10 .5-1.5'

Project Number: 60103292 Client Sample Number: 8

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.36%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (l	EPA 5035/EPA 8	260B)						
Benzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
Ethylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/12/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/12/2009	11/18/2009	JAS
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/12/2009	11/18/2009	JAS

J: The concentration is an estimated value.



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-008A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-10 .5-1.5'

Project Number: 60103292 Client Sample Number: 8

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 8.36%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

D. WALLEY A. A. A. (ACCOUNTS ACCOUNTS)	<u> </u>
Dry Weight Determination (ASTM D 2974-87)	
Percent Moisture (Water Content) 8.4 % 0.1 1 MC091118 11/18/2009 11/19/20	9 BMG
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3545/EPA 8270C)	
Acenaphthene $U \mu g/kg 330 1 PS09K19C 11/19/2009 11/20/20$	9 TMC
Acenaphthylene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Anthracene $U \mu g/kg 330 1 PS09K19C 11/19/2009 11/20/20$	9 TMC
Benzo(a)anthracene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Benzo(a)pyrene $U \mu g/kg 330 1 PS09K19C 11/19/2009 11/20/20$	9 TMC
Benzo(b)fluoranthene $U \mu g/kg 330 1 PS09K19C 11/19/2009 11/20/2009$	9 TMC
Benzo(ghi)perylene U μg/kg 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Benzo(k)fluoranthene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Chrysene $U \mu g/kg 330 1 PS09K19C 11/19/2009 11/20/20$	9 TMC
Dibenzo(a,h)anthracene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Fluoranthene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Fluorene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Indeno(1,2,3-cd)pyrene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	9 TMC
Phenanthrene U $\mu g/kg$ 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC
Pyrene U μg/kg 330 1 PS09K19C 11/19/2009 11/20/20	9 TMC

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-009 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-8 4-5'

Project Number: 60103292 Client Sample Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.36%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank. E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value. U: The analyte was not detected at or above the reporting limit. X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst	
UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 8260B)									
Benzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS	
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS	
MTBE	U	μg/kg	250	1	VA09K18A	11/12/2009	11/18/2009	JAS	
Naphthalene	U	μg/kg	330	1	VA09K18A	11/12/2009	11/18/2009	JAS	
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS	
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS	
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS	
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS	
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/12/2009	11/18/2009	JAS	



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-009A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-8 4-5'

Project Number: 60103292 Client Sample Number: 9

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.36%.

Definitions/ A: Spi Qualifiers: B: The

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)	II.	1				1	
Percent Moisture (Water Content)	6.4	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Lead + Cadmium + Chromium by ICI	P/MS (EPA 3050	B/EPA 6020)						
Cadmium	U	μg/kg	50	1	PT09K20A	11/20/2009	11/20/2009	JLH
Chromium	5800	μg/kg	500	1	PT09K20A	11/20/2009	11/20/2009	JLH
Lead	6000	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 35	50B/EPA 82700	C)					
Acenaphthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Acenaphthylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(b)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(ghi)perylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(k)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Chrysene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluorene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
2-Methylnaphthalene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-009A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-8 4-5'

Project Number: 60103292 Client Sample Number:

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.36%.

 $\mu g/kg$

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

U

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

PS09K19C

X: Matrix Interference has resulted in a raised reporting limit or

11/20/2009

HLS

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

11/19/2009

Prep Dilution Units Prep Date/Time Analyte Result Report Limit Analysis Date/Time Analyst **Batch** Factor Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550B/EPA 8270C) PS09K19C Phenanthrene U μg/kg 330 11/19/2009 11/20/2009 HLS

330

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Pyrene



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-010 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-9 5-5.5'

Project Number: 60103292 Client Sample Number: 10

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 7.15%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

calibration range, therefore the result is estimated. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (F	EPA 5035/EPA 8	260B)						
Benzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/12/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/12/2009	11/18/2009	JAS
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/12/2009	11/18/2009	JAS
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/12/2009	11/18/2009	JAS

J: The concentration is an estimated value.



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-010A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-9 5-5.5'

Project Number: 60103292 Client Sample Number: 10

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 7.15%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

J: The concentration is an estimated value. B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	7.2	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Lead + Cadmium + Chromium by ICP	P/MS (EPA 3050	B/EPA 6020)						
Cadmium	U	μg/kg	50	1	PT09K20A	11/20/2009	11/20/2009	JLH
Chromium	7500	μg/kg	500	1	PT09K20A	11/20/2009	11/20/2009	JLH
Lead	4300	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 354	45/EPA 8270C)						
Acenaphthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Acenaphthylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Chrysene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluorene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
2-Methylnaphthalene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-010A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-9 5-5.5'

Project Number: 60103292 Client Sample Number: 10

Sample Date: 11/12/2009 Chain of Custody Number: 87854

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 7.15%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Units Prep Date/Time Analyte Result Report Limit Analysis Date/Time Analyst **Batch** Factor

Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3545/EPA 8270C)

PS09K19C Phenanthrene U μg/kg 330 11/19/2009 11/20/2009 HLS Pyrene U 330 PS09K19C 11/19/2009 11/20/2009 HLS $\mu g/kg$

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Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-011 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-9

Project Number: 60103292 Client Sample Number: 11

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments:

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst		
VOCs - UST - Unleaded Gasoline (EPA 5030B/EPA 8260B)										
Benzene	U	μg/L	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
Ethylbenzene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
MTBE	U	$\mu \text{g/L}$	5.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
Naphthalene	U	$\mu \text{g/L}$	5.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
Toluene	U	$\mu \text{g/L}$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
1,2,3-Trimethylbenzene	U	μg/L	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
1,2,4-Trimethylbenzene	U	$\mu \text{g/L}$	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
1,3,5-Trimethylbenzene	U	μg/L	1.0	1	V909K20B	11/20/2009	11/20/2009	JAS		
Xylenes	\mathbf{U}	μg/L	3.0	1	V909K20B	11/20/2009	11/20/2009	JAS		



Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-011A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-9

Project Number: 60103292 Client Sample Number: 11

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments:

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 353	35/EPA 8270C)					1	
Acenaphthene	\mathbf{U}	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Acenaphthylene	\mathbf{U}	$\mu \text{g/L}$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Anthracene	\mathbf{U}	$\mu \text{g/L}$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)anthracene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)pyrene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(b)fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(ghi)perylene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(k)fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Chrysene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Dibenzo(a,h)anthracene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluorene	U	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Indeno(1,2,3-cd)pyrene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
2-Methylnaphthalene	\mathbf{U}	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Phenanthrene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Pyrene	\mathbf{U}	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-012 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-7 16-16.5'

Project Number: 60103292 Client Sample Number: 12

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 4.52%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

J: The concentration is an estimated value. U: The analyte was not detected at or above the reporting limit. X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst		
UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 8260B)										
Benzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
MTBE	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Naphthalene	U	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Toluene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Xylenes	U	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS		



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-012A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-7 16-16.5'

Project Number: 60103292 Client Sample Number: 12

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 4.52%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Units Prep Date/Time Analyte Result Report Limit Analysis Date/Time Analyst **Batch** Factor Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 0.1 4.5 11/18/2009 11/19/2009 BMG

referre from the content)	4.5	, 0	0.1	1	1110071110	11/10/2007	11/17/2007	DIVIO
Polynuclear Aromatic Hydrocarbons (PNA	As) (EPA 3545	/EPA 8270C)						
Acenaphthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Acenaphthylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Chrysene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluorene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
2-Methylnaphthalene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-013 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-6 1-2'

Project Number: 60103292 Client Sample Number: 13

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.18%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst	
UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 8260B)									
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
MTBE	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Naphthalene	U	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Xylenes	U	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS	



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-013A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-6 1-2'

Project Number: 60103292 Client Sample Number: 13

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.18%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the

calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D 2	2974-87)							
Percent Moisture (Water Content)	6.2	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 354	45/EPA 8270C)						
Acenaphthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Acenaphthylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(b)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(ghi)perylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(k)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Chrysene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Dibenzo(a,h)anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluorene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Indeno(1,2,3-cd)pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
2-Methylnaphthalene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS

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Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-014 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: **SB-6**

Project Number: 60103292 Client Sample Number: 14

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments:

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
VOCs - UST - Unleaded Gasoline (EP	A 5030B/EPA 82	60B)						
Benzene	\mathbf{U}	μg/L	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Ethylbenzene	U	$\mu g/L$	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
MTBE	\mathbf{U}	$\mu g/L$	5.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Naphthalene	\mathbf{U}	μg/L	5.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Toluene	\mathbf{U}	$\mu g/L$	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Xylenes	\mathbf{U}	μg/L	3.0	1	V909K20B	11/21/2009	11/21/2009	JAS



Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-014A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-6

Project Number: 60103292 Client Sample Number: 14

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 353	5/EPA 8270C))					
Acenaphthene	\mathbf{U}	$\mu g/L$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Acenaphthylene	\mathbf{U}	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Anthracene	\mathbf{U}	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)anthracene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)pyrene	\mathbf{U}	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(b)fluoranthene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(ghi)perylene	\mathbf{U}	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(k)fluoranthene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Chrysene	\mathbf{U}	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Dibenzo(a,h)anthracene	\mathbf{U}	$\mu \text{g/L}$	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluoranthene	\mathbf{U}	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluorene	\mathbf{U}	$\mu \text{g/L}$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
2-Methylnaphthalene	U	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Phenanthrene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Pyrene	U	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-015

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-5 18-19'

Project Number: 60103292 Client Sample Number: 15

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 4.02%.

Definitions/ A: Spike recovery or precision unusable due to dilution.

Qualifiers: B: The analyte was detected in the associated method blan

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank. U: The analyte was not detected at E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value.
U: The analyte was not detected at or above the reporting limit

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.
*: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Analyte Result Report Limit Analysis Date/Time Analyst **Batch Factor** UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 8260B) Benzene VA09K18A μg/kg 50 11/13/2009 11/18/2009 JAS Ethylbenzene U 50 VA09K18A JAS 11/13/2009 11/18/2009 μg/kg MTBE

250 VA09K18A 11/13/2009 11/18/2009 JAS μg/kg Naphthalene VA09K18A U $\mu g \! / \! k g$ 330 11/13/2009 11/18/2009 JAS VA09K18A Toluene 50 11/13/2009 11/18/2009 JAS μg/kg U 1,2,3-Trimethylbenzene VA09K18A 11/13/2009 11/18/2009 $\mu g/kg$ 100 JAS 1,2,4-Trimethylbenzene 100 VA09K18A 11/13/2009 11/18/2009 JAS μg/kg 1,3,5-Trimethylbenzene U 100 VA09K18A 11/13/2009 11/18/2009 JAS μg/kg Xylenes U 150 VA09K18A 11/13/2009 11/18/2009 JAS μg/kg



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-015A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-5 18-19'

Project Number: 60103292 Client Sample Number: 15

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 4.02%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	4.0	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 354	45/EPA 8270C)						
Acenaphthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Acenaphthylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(b)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(ghi)perylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Benzo(k)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Chrysene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Dibenzo(a,h)anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Fluorene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
2-Methylnaphthalene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS
Pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	HLS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-016 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-15 5-6'

Project Number: 60103292 Client Sample Number: 16

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 7.51%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (l	EPA 5035/EPA 82	260B)						_
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Naphthalene	U	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS
Toluene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Xylenes	U	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS

J: The concentration is an estimated value.



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-016A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-15 5-6'

Project Number: 60103292 Client Sample Number: 16

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 7.51%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	7.5	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Polynuclear Aromatic Hydrocarbons ((PNAs) (EPA 35	45/EPA 8270C)						
Acenaphthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Acenaphthylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Benzo(a)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Chrysene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Fluorene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
2-Methylnaphthalene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC
Pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/21/2009	TMC

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-017

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-15

Project Number: 60103292 Client Sample Number: 17

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.
*: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Analyte Result Report Limit Analysis Date/Time Analyst **Batch Factor** VOCs - UST - Unleaded Gasoline (EPA 5030B/EPA 8260B) V909K20B Benzene $\mu \text{g/L}$ 1.0 11/21/2009 11/21/2009 JAS Ethylbenzene U $\mu \text{g/L}$ 1.0 V909K20B JAS 11/21/2009 11/21/2009

MTBE U $\mu \text{g/L}$ 5.0 V909K20B 11/21/2009 11/21/2009 JAS Naphthalene V909K20B U $\mu \text{g/L}$ 5.0 11/21/2009 11/21/2009 JAS V909K20B Toluene μg/L 1.0 11/21/2009 11/21/2009 JAS 1 U 1,2,3-Trimethylbenzene V909K20B 11/21/2009 11/21/2009 $\mu \text{g/L}$ 1.0 JAS 1,2,4-Trimethylbenzene $\mu \text{g/L}$ 1.0 V909K20B 11/21/2009 11/21/2009 JAS 1,3,5-Trimethylbenzene U 1.0 V909K20B 11/21/2009 11/21/2009 JAS $\mu \text{g/L}$ Xylenes U μg/L 3.0 V909K20B 11/21/2009 11/21/2009 JAS



Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-017A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-15

Project Number: 60103292 Client Sample Number: 17

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

		i .					1	
Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbo	ns (PNAs) (EPA 35.	35/EPA 8270C))					
Acenaphthene	\mathbf{U}	μ g/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Acenaphthylene	\mathbf{U}	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Anthracene	${f U}$	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)anthracene	\mathbf{U}	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)pyrene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(b)fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(ghi)perylene	U	$\mu g\!/L$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(k)fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Chrysene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Dibenzo(a,h)anthracene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluoranthene	U	μg/L	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluorene	U	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Indeno(1,2,3-cd)pyrene	U	μg/L	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
2-Methylnaphthalene	U	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Phenanthrene	U	$\mu g/L$	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Pyrene	U	$\mu \text{g/L}$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
1 yiene	U	μg/L	3.0	1	1 309K19A	11/19/2009	11/19/2009	БDА



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-018

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-13 2-3'

Project Number: 60103292 Client Sample Number: 18

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 7.86%.

Definitions/ A: Spike recovery or precision unusable due to dilution.

Qualifiers: B: The analyte was detected in the associated method bl

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the report of the analyte was detected at a concentration greater than the

J: The concentration is an estimated value.
U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

		1						
Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (I	EPA 5035/EPA 8	3260B)						
Benzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
MTBE	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Naphthalene	U	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS
Toluene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Xylenes	U	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-018A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-13 2-3'

Project Number: 60103292 Client Sample Number: 18

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 7.86%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	7.9	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 35	45/EPA 8270C)						
Acenaphthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Acenaphthylene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Benzo(a)anthracene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Benzo(b)fluoranthene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Chrysene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Fluorene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
2-Methylnaphthalene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC
Pyrene	U	μg/kg	330	1	PS09K19C	11/19/2009	11/20/2009	TMC

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-019 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-14 3-4'

Project Number: 60103292 Client Sample Number: 19

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 9.10%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the reporting limit. E: The analyte was detected at a concentration greater than the

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

calibration range, therefore the result is estimated. *: Value reported is outside QA limits

J: The concentration is an estimated value.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
UST - Unleaded Gasoline - Volatiles (I	EPA 5035/EPA 8	3260B)						
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Ethylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS
Toluene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-019A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-14 3-4'

Project Number: 60103292 Client Sample Number: 19

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 9.10%.

Definitions/ A: Spike recovery or precision unusable due to dilution.

Qualifiers: B: The analyte was detected in the associated method bl

calibration range, therefore the result is estimated

B: The analyte was detected in the associated method blank.

U: The analyte was not detected at or above the rep

E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.
*: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Result Report Limit Analysis Date/Time Analyte Analyst **Batch Factor** Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 0.1 11/18/2009 11/19/2009 BMG Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3545/EPA 8270C) Acenaphthene μg/kg 330 PS09K19C 11/19/2009 11/21/2009 TMC PS09K19C Acenaphthylene U 330 1 11/19/2009 11/21/2009 TMC μg/kg Anthracene U 330 PS09K19C 11/19/2009 11/21/2009 TMC $\mu g/kg$ Benzo(a)anthracene U $\mu g \! / \! k g$ 330 1 PS09K19C 11/19/2009 11/21/2009 TMC PS09K19C Benzo(a)pyrene U μg/kg 330 11/19/2009 11/21/2009 TMC Benzo(b)fluoranthene PS09K19C 330 11/19/2009 11/21/2009 TMC U μg/kg Benzo(ghi)perylene 330 PS09K19C 11/19/2009 11/21/2009 TMC $\mu g/kg$ Benzo(k)fluoranthene PS09K19C TI μg/kg 330 1 11/19/2009 11/21/2009 TMC PS09K19C TMC Chrysene U 330 11/19/2009 11/21/2009 μg/kg Dibenzo(a,h)anthracene U 330 PS09K19C 11/19/2009 11/21/2009 TMC μg/kg PS09K19C Fluoranthene U $\mu g/kg$ 330 11/19/2009 11/21/2009 TMC PS09K19C Fluorene 330 11/19/2009 11/21/2009 TMC U μg/kg Indeno(1,2,3-cd)pyrene PS09K19C TMC μg/kg 330 11/19/2009 11/21/2009 2-Methylnaphthalene PS09K19C 11/21/2009 11/19/2009 TMC U μg/kg 330

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μg/kg

μg/kg

H

U

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PS09K19C

PS09K19C

F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

11/21/2009

11/21/2009

TMC

TMC

11/19/2009

11/19/2009

330

330

Phenanthrene

Pyrene



Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-020

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-16 9.0-9.7'

Project Number: 60103292 Client Sample Number: 20

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.47%.

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 5035	(EPA 5035/EP	A 8260B)					
Acetone	U	μg/kg	1000	1	VA09K18A	11/13/2009	11/18/2009	JAS
Acrylonitrile	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromobenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromochloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromodichloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromoform	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromomethane	\mathbf{U}	μg/kg	200	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Butanone	\mathbf{U}	μg/kg	750	1	VA09K18A	11/13/2009	11/18/2009	JAS
n-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
sec-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
tert-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Carbon Disulfide	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Carbon Tetrachloride	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chlorobenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloroethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloroform	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloromethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Chlorotoluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Dibromochloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS

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Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-020

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-16 9.0-9.7'

Project Number: 60103292 Client Sample Number: 20

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.47%.

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 503	5 (EPA 5035/E	PA 8260B)		<u> </u>			
1,2-Dibromo-3-chloropropane	U	μg/kg	10	1	VA09K18A	11/13/2009	11/18/2009	JAS
Dibromomethane	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2-Dichlorobenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,3-Dichlorobenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,4-Dichlorobenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Dichlorodifluoromethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1-Dichloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2-Dichloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1-Dichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
cis-1,2-Dichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
trans-1,2-Dichloroethene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2-Dichloropropane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
cis-1,3-Dichloropropene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
trans-1,3-Dichloropropene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Ethylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Ethylene Dibromide	\mathbf{U}	μg/kg	20	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Hexanone	\mathbf{U}	μg/kg	2500	1	VA09K18A	11/13/2009	11/18/2009	JAS
Methyl Iodide	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Isopropylbenzene	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
4-Methyl-2-pentanone	U	μg/kg	2500	1	VA09K18A	11/13/2009	11/18/2009	JAS

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Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-020

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-16 9.0-9.7'

Project Number: 60103292 Client Sample Number: 20

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.47%.

Definitions/ A: Sp Qualifiers: B: The

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 503	5 (EPA 5035/E	PA 8260B)		<u> </u>			
Methylene Chloride	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
MTBE	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Naphthalene	U	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS
n-Propylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Styrene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,1,2-Tetrachloroethane	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,2,2-Tetrachloroethane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Tetrachloroethene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Toluene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,4-Trichlorobenzene	U	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,1-Trichloroethane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,2-Trichloroethane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Trichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Trichlorofluoromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,3-Trichloropropane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Vinyl Chloride	U	μg/kg	40	1	VA09K18A	11/13/2009	11/18/2009	JAS
Xylenes	U	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-020A Fibertec Project Number: 36840

Client Sample Information

MDOT/ Plainwell Project Identification: Client Sample Description: SB-16 9.0-9.7'

60103292 Client Sample Number: 20 Project Number:

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.47%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Analyte Result Report Limit Analysis Date/Time Analyst **Batch Factor** Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 0.1 11/18/2009 11/19/2009 BMG Michigan 10 Elements by ICP/MS (EPA 6020) 11/20/2000

Arsenic	2300	μg/kg	100	1	PT09K20A	11/20/2009	11/20/2009	JLH
Barium	18000	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Cadmium	59	μg/kg	50	1	PT09K20A	11/20/2009	11/20/2009	JLH
Chromium	4600	μg/kg	500	1	PT09K20A	11/20/2009	11/20/2009	JLH
Copper	3400	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Lead	2200	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Selenium	\mathbf{U}	μg/kg	200	1	PT09K20A	11/20/2009	11/20/2009	JLH
Silver	\mathbf{U}	μg/kg	100	1	PT09K20A	11/20/2009	11/20/2009	JLH
Zinc	11000	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Mercury by CVAAS (EPA 7471A)								
Mercury	\mathbf{U}	μg/kg	50	1	PM09K19B	11/19/2009	11/19/2009	MAP
Polychlorinated Biphenyls (PCBs) (EPA 35	50B/EPA 80	082)						
Aroclor-1016	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1221	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1232	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1242	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1248	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1254	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA

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μg/kg

 \mathbf{U}

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PS09K19B

F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

11/20/2009

BDA

11/19/2009

330

Aroclor-1260



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-020A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-16 9.0-9.7'

Project Number: 60103292 Client Sample Number: 20

Sample Date: 11/13/2009 Chain of Custody Number: 87855

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 6.47%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polychlorinated Biphenyls (PCBs) (I	EPA 3550B/EPA 80	82)						
Aroclor-1262	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1268	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Polynuclear Aromatic Hydrocarbon	s (PNAs) (EPA 3550	0B/EPA 8270	C)					
Acenaphthene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Acenaphthylene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Anthracene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(a)anthracene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(k)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Chrysene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Fluoranthene	370	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Fluorene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Indeno(1,2,3-cd)pyrene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
2-Methylnaphthalene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Phenanthrene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Pyrene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC

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Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-021

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17 12-13'

Project Number: 60103292 Client Sample Number: 21

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 2.89%.

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

calibration range, therefore the result is estimated. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 5035	EPA 5035/EP	A 8260B)					
Acetone	\mathbf{U}	μg/kg	1000	1	VA09K18A	11/13/2009	11/18/2009	JAS
Acrylonitrile	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromobenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromochloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromodichloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromoform	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromomethane	\mathbf{U}	μg/kg	200	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Butanone	\mathbf{U}	μg/kg	750	1	VA09K18A	11/13/2009	11/18/2009	JAS
n-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
sec-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
tert-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Carbon Disulfide	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Carbon Tetrachloride	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chlorobenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloroethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloroform	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloromethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Chlorotoluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Dibromochloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-021 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17 12-13'

Project Number: 60103292 Client Sample Number: 21

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 2.89%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 5035	(EPA 5035/E	PA 8260B)					
1,2-Dibromo-3-chloropropane	\mathbf{U}	μg/kg	10	1	VA09K18A	11/13/2009	11/18/2009	JAS
Dibromomethane	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2-Dichlorobenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,3-Dichlorobenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,4-Dichlorobenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Dichlorodifluoromethane	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1-Dichloroethane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2-Dichloroethane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1-Dichloroethene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
cis-1,2-Dichloroethene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
trans-1,2-Dichloroethene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2-Dichloropropane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
cis-1,3-Dichloropropene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
trans-1,3-Dichloropropene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Ethylene Dibromide	U	μg/kg	20	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Hexanone	U	μg/kg	2500	1	VA09K18A	11/13/2009	11/18/2009	JAS
Methyl Iodide	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Isopropylbenzene	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
4-Methyl-2-pentanone	U	μg/kg	2500	1	VA09K18A	11/13/2009	11/18/2009	JAS

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-021 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17 12-13'

Project Number: 60103292 Client Sample Number: 21

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 2.89%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

calibration range, therefore the result is estimated. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst		
Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)										
Methylene Chloride	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS		
n-Propylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Styrene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,1,1,2-Tetrachloroethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,1,2,2-Tetrachloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Tetrachloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,2,4-Trichlorobenzene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,1,1-Trichloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,1,2-Trichloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Trichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Trichlorofluoromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,2,3-Trichloropropane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Vinyl Chloride	\mathbf{U}	μg/kg	40	1	VA09K18A	11/13/2009	11/18/2009	JAS		
Xylenes	U	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS		

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-021A 36840 Fibertec Project Number:

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17 12-13'

60103292 Client Sample Number: 21 Project Number:

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 2.89%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

Fibertec

services

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated

J: The concentration is an estimated value

U: The analyte was not detected at or above the reporting limit

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Result Report Limit Analysis Date/Time Analyte Analyst **Batch Factor** Dry Weight Determination (ASTM D 2974-87) Percent Moisture (Water Content) MC091118 2.9 0.1 11/18/2009 11/19/2009 BMG Michigan 10 Elements by ICP/MS (EPA 6020) Arsenic 1400 μg/kg 100 PT09K20A 11/20/2009 11/20/2009 JLH 1000 PT09K20A Barium 3300 11/20/2009 11/20/2009 JLH μg/kg 1 Cadmium U 50 PT09K20A 11/20/2009 11/20/2009 JLH μg/kg Chromium 3200 $\mu g/kg$ 500 PT09K20A 11/20/2009 11/20/2009 JLH PT09K20A Copper 2200 μg/kg 1000 11/20/2009 11/20/2009 JLH PT09K20A Lead 1300 1000 11/20/2009 11/20/2009 JLH μg/kg Selenium 200 PT09K20A 11/20/2009 11/20/2009 JLH μg/kg Silver PT09K20A TI μg/kg 100 11/20/2009 11/20/2009 ILH 8000 1000 PT09K20A 11/20/2009 11/20/2009 JLH μg/kg Mercury by CVAAS (EPA 7471A) PM09K19B Mercury U μg/kg 50 1 11/19/2009 11/19/2009 MAP Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082) Aroclor-1016 PS09K19B μg/kg 330 11/19/2009 11/20/2009 BDA Aroclor-1221 H $\mu g \! / \! k g$ 330 PS09K19B 11/19/2009 11/20/2009 **BDA** Aroclor-1232 PS09K19B 11/19/2009 11/20/2009 **BDA** U μg/kg 330 PS09K19B Aroclor-1242 U μg/kg 330 11/19/2009 11/20/2009 **BDA** Aroclor-1248 $\mu g \! / \! k g$ 330 PS09K19B 11/19/2009 11/20/2009 BDA U

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μg/kg

μg/kg

U

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PS09K19B

PS09K19B

F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

11/20/2009

11/20/2009

BDA

BDA

11/19/2009

11/19/2009

330

330

Aroclor-1254

Aroclor-1260



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-021A 36840 Fibertec Project Number:

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17 12-13'

60103292 Client Sample Number: 21 Project Number:

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 2.89%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated

J: The concentration is an estimated value. U: The analyte was not detected at or above the reporting limit

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Prep Dilution Prep Date/Time Units Result Report Limit Analysis Date/Time Analyte Analyst **Batch Factor** Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082) Aroclor-1262 $\mu g \! / \! kg$ PS09K19B U 330 11/19/2009 11/20/2009 BDA Aroclor-1268 U 330 PS09K19B BDA 11/19/2009 11/20/2009 μg/kg Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 3550B/EPA 8270C) PS09K19B Acenaphthene 11/19/2009 11/21/2009 TMC U μg/kg 330 Acenaphthylene U 330 PS09K19B 11/19/2009 11/21/2009 TMC $\mu g/kg$ Anthracene U $\mu g/kg$ 330 PS09K19B 11/19/2009 11/21/2009 TMC PS09K19B Benzo(a)anthracene U μg/kg 330 11/19/2009 11/21/2009 TMC PS09K19B Benzo(a)pyrene 330 11/19/2009 11/21/2009 TMC U μg/kg Benzo(b)fluoranthene 330 PS09K19B 11/19/2009 11/21/2009 TMC $\mu g/kg$ PS09K19B Benzo(ghi)perylene TI μg/kg 330 1 11/19/2009 11/21/2009 TMC Benzo(k)fluoranthene U PS09K19B TMC 330 11/19/2009 11/21/2009 μg/kg Chrysene U 330 PS09K19B 11/19/2009 11/21/2009 TMC μg/kg PS09K19B Dibenzo(a,h)anthracene U μg/kg 330 11/19/2009 11/21/2009 TMC PS09K19B Fluoranthene 11/19/2009 11/21/2009 TMC U μg/kg 330 Fluorene PS09K19B TMC μg/kg 330 11/19/2009 11/21/2009 PS09K19B Indeno(1,2,3-cd)pyrene 11/19/2009 11/21/2009 TMC U μg/kg 330 2-Methylnaphthalene H 330 PS09K19B 11/19/2009 11/21/2009 TMC μg/kg Phenanthrene U 330 PS09K19B 11/19/2009 11/21/2009 TMC μg/kg PS09K19B 11/19/2009 TMC Pyrene U μg/kg 330 11/21/2009

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Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-022 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17

Project Number: 60103292 Client Sample Number: 22

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst		
Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)										
Acetone	U	μg/L	50	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Acrylonitrile	U	$\mu \text{g/L}$	2.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Benzene	U	$\mu \text{g/L}$	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
Bromobenzene	U	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Bromochloromethane	U	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Bromodichloromethane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Bromoform	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Bromomethane	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
2-Butanone	U	μg/L	25	1	VB09K23A	11/23/2009	11/23/2009	BAG		
n-Butylbenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
sec-Butylbenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
tert-Butylbenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Carbon Disulfide	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Carbon Tetrachloride	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Chlorobenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Chloroethane	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Chloroform	U	μg/L	3.0	3	VB09K23A	11/23/2009	11/23/2009	BAG		
Chloromethane	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
2-Chlorotoluene	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Dibromochloromethane	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-022

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17

Project Number: 60103292 Client Sample Number: 22

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst		
Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)										
1,2-Dibromo-3-chloropropane	\mathbf{U}	$\mu\text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Dibromomethane	\mathbf{U}	$\mu \text{g/L}$	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,2-Dichlorobenzene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,3-Dichlorobenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,4-Dichlorobenzene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Dichlorodifluoromethane	\mathbf{U}	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,1-Dichloroethane	\mathbf{U}	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,2-Dichloroethane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,1-Dichloroethene	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
cis-1,2-Dichloroethene	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
trans-1,2-Dichloroethene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,2-Dichloropropane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
cis-1,3-Dichloropropene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
trans-1,3-Dichloropropene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Ethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
Ethylene Dibromide	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
2-Hexanone	U	μg/L	50	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Methyl Iodide	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Isopropylbenzene	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
4-Methyl-2-pentanone	\mathbf{U}	μg/L	50	1	VB09K23A	11/23/2009	11/23/2009	BAG		

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-022

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17

Project Number: 60103292 Client Sample Number: 22

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst		
Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)										
Methylene Chloride	\mathbf{U}	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
MTBE	\mathbf{U}	$\mu g/L$	5.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
Naphthalene	U	$\mu g/L$	5.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
n-Propylbenzene	\mathbf{U}	$\mu g \! / \! L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Styrene	\mathbf{U}	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,1,1,2-Tetrachloroethane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,1,2,2-Tetrachloroethane	\mathbf{U}	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Tetrachloroethene	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Toluene	\mathbf{U}	$\mu g/L$	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
1,2,4-Trichlorobenzene	\mathbf{U}	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,1,1-Trichloroethane	\mathbf{U}	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,1,2-Trichloroethane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Trichloroethene	\mathbf{U}	$\mu g \! / \! L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Trichlorofluoromethane	\mathbf{U}	$\mu g \! / \! L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,2,3-Trichloropropane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
1,2,3-Trimethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
1,2,4-Trimethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
1,3,5-Trimethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG		
Vinyl Chloride	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG		
Xylenes	U	μg/L	3.0	1	V909K23A	11/23/2009	11/23/2009	BAG		

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Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-022A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17

Project Number: 60103292 Client Sample Number: 22

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst	
Polychlorinated Biphenyls (PCBs) (EPA 3510C/EPA 8082)									
Aroclor-1016	U	$\mu g/L$	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1221	U	$\mu \text{g/L}$	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1232	U	$\mu \text{g/L}$	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1242	\mathbf{U}	μg/L	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1248	\mathbf{U}	$\mu \text{g/L}$	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1254	U	μg/L	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1260	U	μg/L	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1262	U	μg/L	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Aroclor-1268	\mathbf{U}	$\mu \text{g/L}$	0.40	2	PS09K18G	11/18/2009	11/20/2009	TMC	
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 353	35/EPA 8270C)							
Acenaphthene	\mathbf{U}	$\mu \text{g/L}$	10	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Acenaphthylene	U	$\mu \text{g/L}$	10	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Anthracene	\mathbf{U}	$\mu g/L$	10	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Benzo(a)anthracene	U	$\mu g/L$	2.0	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Benzo(a)pyrene	\mathbf{U}	$\mu g/L$	2.0	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Benzo(b)fluoranthene	U	$\mu \text{g/L}$	2.0	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Benzo(ghi)perylene	\mathbf{U}	$\mu \text{g/L}$	2.0	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Benzo(k)fluoranthene	\mathbf{U}	$\mu \text{g/L}$	2.0	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Chrysene	\mathbf{U}	μg/L	2.0	2	PS09K19A	11/19/2009	11/19/2009	BDA	
Dibenzo(a,h)anthracene	U	μg/L	4.0	2	PS09K19A	11/19/2009	11/19/2009	BDA	

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Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-022A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17

Project Number: 60103292 Client Sample Number: 22

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 35	35/EPA 8270C))					
Fluoranthene	U	μg/L	2.0	2	PS09K19A	11/19/2009	11/19/2009	BDA
Fluorene	U	μg/L	10	2	PS09K19A	11/19/2009	11/19/2009	BDA
Indeno(1,2,3-cd)pyrene	U	μg/L	4.0	2	PS09K19A	11/19/2009	11/19/2009	BDA
2-Methylnaphthalene	U	μg/L	10	2	PS09K19A	11/19/2009	11/19/2009	BDA
Phenanthrene	U	μg/L	4.0	2	PS09K19A	11/19/2009	11/19/2009	BDA
Pyrene	U	μg/L	10	2	PS09K19A	11/19/2009	11/19/2009	BDA



Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-022B Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-17

Project Number: 60103292 Client Sample Number: 22

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Michigan 10 Elements by ICP/MS, To	tal Recoverable	(EPA 6020)						
Arsenic	U	$\mu \text{g/L}$	5.0	1	PT09K19B	11/19/2009	11/23/2009	JLH
Barium	U	$\mu \text{g/L}$	100	1	PT09K19B	11/19/2009	11/23/2009	JLH
Cadmium	U	$\mu \text{g/L}$	1.0	1	PT09K19B	11/19/2009	11/23/2009	JLH
Chromium	U	$\mu \text{g/L}$	10	1	PT09K19B	11/19/2009	11/23/2009	JLH
Copper	U	$\mu \text{g/L}$	4.0	1	PT09K19B	11/19/2009	11/23/2009	JLH
Lead	U	$\mu \text{g/L}$	3.0	1	PT09K19B	11/19/2009	11/23/2009	JLH
Selenium	U	$\mu \text{g/L}$	5.0	1	PT09K19B	11/19/2009	11/23/2009	JLH
Silver	U	$\mu \text{g/L}$	0.20	1	PT09K19B	11/19/2009	11/23/2009	JLH
Zinc	U	$\mu \text{g/L}$	50	1	PT09K19B	11/19/2009	11/23/2009	JLH
Mercury by CVAAS, Total (EPA 7470	(A)							
Mercury	U	μg/L	0.20	1	PM09K19A	11/19/2009	11/19/2009	MAP



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-023 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-18 4-5'

Project Number: 60103292 Client Sample Number: 23

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 5.97%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

calibration range, therefore the result is estimated. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 5035	5 (EPA 5035/EP	A 8260B)					
Acetone	\mathbf{U}	μg/kg	1000	1	VA09K18A	11/13/2009	11/18/2009	JAS
Acrylonitrile	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromobenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromochloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromodichloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromoform	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Bromomethane	\mathbf{U}	μg/kg	200	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Butanone	\mathbf{U}	μg/kg	750	1	VA09K18A	11/13/2009	11/18/2009	JAS
n-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
sec-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
tert-Butylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Carbon Disulfide	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Carbon Tetrachloride	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chlorobenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloroethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloroform	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Chloromethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
2-Chlorotoluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Dibromochloromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS

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Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-023

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-18 4-5'

Project Number: 60103292 Client Sample Number: 23

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 5.97%.

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.
*: Value reported is outside QA limits

Analyte Result Units Report Limit Dilution Factor Prep Batch Prep Date/Time Analysis Date/Time Analyst ic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)

				2 440401					
Volatile Organic Compounds (VOCs)	by GC/MS, 5035 (I	EPA 5035/I	EPA 8260B)						
1,2-Dibromo-3-chloropropane	\mathbf{U}	μg/kg	10	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Dibromomethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,2-Dichlorobenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,3-Dichlorobenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,4-Dichlorobenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Dichlorodifluoromethane	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,1-Dichloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,2-Dichloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,1-Dichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
cis-1,2-Dichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
trans-1,2-Dichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,2-Dichloropropane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
cis-1,3-Dichloropropene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
trans-1,3-Dichloropropene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Ethylbenzene	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Ethylene Dibromide	U	μg/kg	20	1	VA09K18A	11/13/2009	11/18/2009	JAS	
2-Hexanone	\mathbf{U}	μg/kg	2500	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Methyl Iodide	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Isopropylbenzene	U	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS	
4-Methyl-2-pentanone	U	μg/kg	2500	1	VA09K18A	11/13/2009	11/18/2009	JAS	

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Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-023

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-18 4-5'

Project Number: 60103292 Client Sample Number: 23

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 5.97%.

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS, 5035	(EPA 5035/E	PA 8260B)				1	
Methylene Chloride	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
MTBE	${f U}$	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS
n-Propylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Styrene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,1,2-Tetrachloroethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,2,2-Tetrachloroethane	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Tetrachloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,4-Trichlorobenzene	U	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,1-Trichloroethane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,1,2-Trichloroethane	U	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Trichloroethene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS
Trichlorofluoromethane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,3-Trichloropropane	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,3-Trimethylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
1,3,5-Trimethylbenzene	U	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS
Vinyl Chloride	\mathbf{U}	μg/kg	40	1	VA09K18A	11/13/2009	11/18/2009	JAS
Xylenes	U	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS

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Analytical Laboratory Report

Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-023A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-18 4-5'

Project Number: 60103292 Client Sample Number: 23

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 5.97%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	6.0	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Michigan 10 Elements by ICP/MS (EP	A 6020)							
Arsenic	4000	μg/kg	100	1	PT09K20A	11/20/2009	11/20/2009	JLH
Barium	49000	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Cadmium	120	μg/kg	50	1	PT09K20A	11/20/2009	11/20/2009	JLH
Chromium	6100	μg/kg	500	1	PT09K20A	11/20/2009	11/20/2009	JLH
Copper	7700	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Lead	27000	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Selenium	U	μg/kg	200	1	PT09K20A	11/20/2009	11/20/2009	JLH
Silver	U	μg/kg	100	1	PT09K20A	11/20/2009	11/20/2009	JLH
Zinc	29000	μg/kg	1000	1	PT09K20A	11/20/2009	11/20/2009	JLH
Mercury by CVAAS (EPA 7471A)								
Mercury	U	μg/kg	50	1	PM09K19B	11/19/2009	11/19/2009	MAP
Polychlorinated Biphenyls (PCBs) (EP	A 3550B/EPA 80	082)						
Aroclor-1016	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1221	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1232	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1242	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1248	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1254	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1260	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA

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Client Identification: AECOM - Lansing Sample Matrix: Soil/Solid

Fibertec Project Number: 36840 Sample Number: 36840-023A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-18 4-5'

Project Number: 60103292 Client Sample Number: 23

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 5.97%.

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polychlorinated Biphenyls (PCBs) (E	PA 3550B/EPA 80	82)						
Aroclor-1262	${f U}$	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Aroclor-1268	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	BDA
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 3550	0B/EPA 8270	C)					
Acenaphthene	${f U}$	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Acenaphthylene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(a)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(b)fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(k)fluoranthene	${f U}$	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Chrysene	${f U}$	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Dibenzo(a,h)anthracene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Fluorene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Indeno(1,2,3-cd)pyrene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
2-Methylnaphthalene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Pyrene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC

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Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-024 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-19 1-2'

Project Number: 60103292 Client Sample Number: 24

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 5.34%.

Definitions/ A: Spike recovery or precision unusable due to dilution. Qualifiers:

calibration range, therefore the result is estimated.

B: The analyte was detected in the associated method blank. E: The analyte was detected at a concentration greater than the

J: The concentration is an estimated value. U: The analyte was not detected at or above the reporting limit. X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst	
UST - Unleaded Gasoline - Volatiles (EPA 5035/EPA 8260B)									
Benzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Ethylbenzene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
MTBE	\mathbf{U}	μg/kg	250	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Naphthalene	\mathbf{U}	μg/kg	330	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Toluene	\mathbf{U}	μg/kg	50	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,2,3-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,2,4-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
1,3,5-Trimethylbenzene	\mathbf{U}	μg/kg	100	1	VA09K18A	11/13/2009	11/18/2009	JAS	
Xylenes	\mathbf{U}	μg/kg	150	1	VA09K18A	11/13/2009	11/18/2009	JAS	



Client Identification: **AECOM - Lansing** Sample Matrix: Soil/Solid

Sample Number: 36840-024A Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-19 1-2'

Project Number: 60103292 Client Sample Number: 24

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments: All Results Reported On Dry Weight Basis. Percent Moisture = 5.34%.

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Dry Weight Determination (ASTM D	2974-87)							
Percent Moisture (Water Content)	5.3	%	0.1	1	MC091118	11/18/2009	11/19/2009	BMG
Polynuclear Aromatic Hydrocarbons (PNAs) (EPA 35	50B/EPA 8270	C)					
Acenaphthene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Acenaphthylene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Anthracene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(a)anthracene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(a)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(b)fluoranthene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(ghi)perylene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Benzo(k)fluoranthene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Chrysene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Dibenzo(a,h)anthracene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Fluoranthene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Fluorene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Indeno(1,2,3-cd)pyrene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
2-Methylnaphthalene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Phenanthrene	\mathbf{U}	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC
Pyrene	U	μg/kg	330	1	PS09K19B	11/19/2009	11/20/2009	TMC

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-025

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-19

Project Number: 60103292 Client Sample Number: 25

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ A: Spike recovery
Qualifiers: B: The analyte wa

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
VOCs - UST - Unleaded Gasoline (EP.	A 5030B/EPA 82	260B)						
Benzene	U	μg/L	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Ethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
MTBE	\mathbf{U}	$\mu \text{g/L}$	5.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Naphthalene	\mathbf{U}	$\mu g\!/L$	5.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Toluene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
1,2,3-Trimethylbenzene	\mathbf{U}	$\mu g\!/L$	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
1,2,4-Trimethylbenzene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
1,3,5-Trimethylbenzene	\mathbf{U}	μg/L	1.0	1	V909K20B	11/21/2009	11/21/2009	JAS
Xylenes	\mathbf{U}	μg/L	3.0	1	V909K20B	11/21/2009	11/21/2009	JAS



Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-025A

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: SB-19

Project Number: 60103292 Client Sample Number: 25

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Polynuclear Aromatic Hydrocarbons	(PNAs) (EPA 35.	35/EPA 8270C)			<u>, </u>			
Acenaphthene	U	$\mu \text{g/L}$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Acenaphthylene	U	$\mu g/L$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Anthracene	\mathbf{U}	$\mu g/L$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)anthracene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(a)pyrene	\mathbf{U}	$\mu g/L$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(b)fluoranthene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(ghi)perylene	\mathbf{U}	$\mu g/L$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Benzo(k)fluoranthene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Chrysene	\mathbf{U}	$\mu g/L$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Dibenzo(a,h)anthracene	\mathbf{U}	$\mu \text{g/L}$	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluoranthene	\mathbf{U}	$\mu \text{g/L}$	1.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Fluorene	\mathbf{U}	$\mu g/L$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Indeno(1,2,3-cd)pyrene	\mathbf{U}	$\mu \text{g/L}$	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
2-Methylnaphthalene	\mathbf{U}	$\mu \text{g/L}$	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Phenanthrene	\mathbf{U}	$\mu g/L$	2.0	1	PS09K19A	11/19/2009	11/19/2009	BDA
Pyrene	\mathbf{U}	μg/L	5.0	1	PS09K19A	11/19/2009	11/19/2009	BDA



Client Identification: **AECOM - Lansing** Sample Matrix: **Ground Water**

Sample Number: 36840-026 Fibertec Project Number: 36840

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: Trip Blank

Project Number: 60103292 Client Sample Number: 26

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis. *: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EPA	5030B/EPA 82	260B)					
Acetone	\mathbf{U}	μg/L	50	1	VB09K23A	11/23/2009	11/23/2009	BAG
Acrylonitrile	U	$\mu g/L$	2.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Benzene	U	$\mu g/L$	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG
Bromobenzene	U	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Bromochloromethane	U	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Bromodichloromethane	U	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Bromoform	U	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Bromomethane	U	$\mu \text{g/L}$	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
2-Butanone	U	$\mu g/L$	25	1	VB09K23A	11/23/2009	11/23/2009	BAG
n-Butylbenzene	U	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
sec-Butylbenzene	U	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
tert-Butylbenzene	U	$\mu \text{g/L}$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Carbon Disulfide	U	$\mu g/L$	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Carbon Tetrachloride	U	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Chlorobenzene	U	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Chloroethane	U	$\mu g/L$	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Chloroform	U	$\mu g/L$	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Chloromethane	U	$\mu g/L$	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
2-Chlorotoluene	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Dibromochloromethane	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-026

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: Trip Blank

Project Number: 60103292 Client Sample Number: 26

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or distorted result.

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EPA	5030B/EPA 8	3260B)		11.		1	
1,2-Dibromo-3-chloropropane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Dibromomethane	\mathbf{U}	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,2-Dichlorobenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,3-Dichlorobenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,4-Dichlorobenzene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Dichlorodifluoromethane	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,1-Dichloroethane	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,2-Dichloroethane	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,1-Dichloroethene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
cis-1,2-Dichloroethene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
trans-1,2-Dichloroethene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,2-Dichloropropane	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
cis-1,3-Dichloropropene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
trans-1,3-Dichloropropene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Ethylbenzene	U	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG
Ethylene Dibromide	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
2-Hexanone	U	μg/L	50	1	VB09K23A	11/23/2009	11/23/2009	BAG
Methyl Iodide	U	$\mu \text{g/L}$	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Isopropylbenzene	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
4-Methyl-2-pentanone	U	μg/L	50	1	VB09K23A	11/23/2009	11/23/2009	BAG

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-026

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: Trip Blank

Project Number: 60103292 Client Sample Number: 26

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.

*: Value reported is outside QA limits

Analyte	Result	Units	Report Limit	Dilution Factor	Prep Batch	Prep Date/Time	Analysis Date/Time	Analyst
Volatile Organic Compounds (VOCs)	by GC/MS (EPA	5030B/EPA 82	260B)				1	
Methylene Chloride	U	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
2-Methylnaphthalene	U	$\mu g/L$	5.0	1	V909K23A	11/23/2009	11/23/2009	BAG
MTBE	\mathbf{U}	$\mu g/L$	5.0	1	V909K23A	11/23/2009	11/23/2009	BAG
Naphthalene	\mathbf{U}	μg/L	5.0	1	V909K23A	11/23/2009	11/23/2009	BAG
n-Propylbenzene	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Styrene	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,1,1,2-Tetrachloroethane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,1,2,2-Tetrachloroethane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Tetrachloroethene	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Toluene	\mathbf{U}	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG
1,2,4-Trichlorobenzene	\mathbf{U}	μg/L	5.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,1,1-Trichloroethane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,1,2-Trichloroethane	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Trichloroethene	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
Trichlorofluoromethane	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,2,3-Trichloropropane	\mathbf{U}	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG
1,2,3-Trimethylbenzene	U	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG
1,2,4-Trimethylbenzene	U	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG
1,3,5-Trimethylbenzene	U	μg/L	1.0	1	V909K23A	11/23/2009	11/23/2009	BAG
Vinyl Chloride	U	μg/L	1.0	1	VB09K23A	11/23/2009	11/23/2009	BAG

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Client Identification: AECOM - Lansing Sample Matrix: Ground Water

Fibertec Project Number: 36840 Sample Number: 36840-026

Client Sample Information

Project Identification: MDOT/ Plainwell Client Sample Description: Trip Blank

Project Number: 60103292 Client Sample Number: 26

Sample Date: 11/13/2009 Chain of Custody Number: 87856

Comments:

Definitions/ Qualifiers: A: Spike recovery or precision unusable due to dilution.

B: The analyte was detected in the associated method blank.

E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J: The concentration is an estimated value.

U: The analyte was not detected at or above the reporting limit.

X: Matrix Interference has resulted in a raised reporting limit or

W: Results reported on a wet-weight basis.
*: Value reported is outside QA limits

Analyte Result Units Report Limit Dilution Factor Prep Batch Prep Date/Time Analysis Date/Time Analyst

Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)

Xylenes $U \mu g/L 3.0 1 V909K23A 11/23/2009 11/23/2009 BAG$

FiberteC environmental services

Holf, MI 48842 1914 Holloway Drive Analytical Laboratory 8660 S. Mackinaw Trail

> Holf, MI 48842 1914 Holloway Drive Industrial Hygiene Services, Inc.

Geoprobe

11766 E. Grand River Fax: 810 220 3311 Phone: 810 220 3300 Brighton, MI 48116

> PAGE 1 of 3 Chain of Custody # 8 7 8 5 4

			. 7.															
LAB USE ONLY: Fiberiec project number: Laboratory Tracking: Temperature of Roceint:	Relinquished By:	Relinquished By:	Comments: Commen		1400 7	1 1335 6		1 oc 1		り	11/13/15 1 58-1 13-13.5'	Lab Client Sample Date Time Sample # Client Sample Descriptor	Purchase Order#		Project Name/Number:	Contact Person: ALLING TREATSHE CRAIL SIMON	Client Name: ACCOM	emall: lab@fibertec.us
	Date / Time Received By Laboratory.	Date/ Time Received By: 1430	Sayxxx	S 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	6W3 Y X X	SQYXX	SAYKKK	5211XXX	1 X X K K S	Sayx	MATRIX # OF C	ON' VED		3	ODE)	PARAMETERS	emall: asbestos@fibertec.us
36840 COC Revision: April, 2006	DUN											Remarks:	•	Standard (5-7 bus. days) Other: Specify P Wipe		24 hour KUSH (surcharge applies) 48 hour RUSH (surcharge	Turnaround Malfix Code	

COC Revision: April, 2006

Temperature at Receipt:

FiberteC environmental services

Hoff, MI 48842 1914 Holloway Drive Analytical Laboratory 8660 S. Mackinaw Trail

emall: lab@fibertec.us

Holf, MI 48842 1914 Holloway Drive Industrial Hygiene Services, Inc.

email: asbestos@libertec.us Fax: 517 699 0382

Brighton, MI 48116 11766 E. Grand River Geoprobe

PAGE Sof_ Chain of Custody # **87855**

Project Name/ Number: Contact Person: CLAIL SIMON Client Name: Purchase Order# Relinquished & Laboratory Tracking: Fibertec project number LAB USE ONLY: Relinquished By Relinquished B 111/3/09 idglo9 1113/09 AECOM ica 1040 09/10 **G**E 150 Time Sample # Client <u>_</u> 58-SB-9 36-6 SB- 6 58-15 8-15 5B-5 Client Sample Descriptor 2,0 18-19 GW13 Date/Time Date/ Time MATRIX (SEE RIGHT CORNER FOR CODE) 3 نو **W** # OF CONTAINERS Received/By: Received By Laborator PARAMETERS Remarks: Turnaround Other: Specify Standard (5-7 bus, days) applies)
72 hour RUSH (surcharge 48 hour RUSH (surcharge 24 hour RUSH (surcharge applies) COC Revision: April, 2006 Matrix Code <u>©</u> Soi Water SW GW Ground Water www.waste water Other: Specify Surface Water

Temperature at Receipt:

FiberteC environmental services

Holf, MI 48842 1914 Holloway Drive Analytical Laboratory 8660 S. Mackinaw Trail Cadillac, MI 49601

Holt, MI 48842 1914 Holloway Drive Industrial Hygiene Services, Inc.

Brighton, MI 48116 11766 E. Grand River Geoprobe Phone: 810 220 3300

Chain of Custody # 87856 PAGE 3 of 3

emall: lab@flberlec.us		email: asbe	emall: asbestos@libertec.us		
Client Name: AFA			PARAMETERS	Turnaround	Matrix Code
] iii	E)		5	24 hour RUSH (surcharge applies)	S Soil Gw Ground Water
Project Name/ Number:	FOR COD		MTB	48 hour RUSH (surcharge applies) 72 hour RUSH (surcharge	water
	RIGHT CORNER TAINERS D (Y/N)		TMBs,	opplies) Standard (5-7 bus. days) Other: Specify	A Air Www.waste Water OOil X Other: Specify P Wipe
Purchase Order#	ON	Bs A:	<i>/(</i>		
Client	OF C	VC PCI OVI	111 1316		
# Date Time Sample # Client Sample Descriptor	# PF	<i>y</i>	1	Kemars:	
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Relinquished By:	Date/Time	Receiv	Constant Ind	bur	
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LAB USE ONLY: Fiberiec project number: Laboratory Tracking:					
Temperature at Receipt:				COC Re	COC Revision: April, 2006